ASL

Australian Society for Limnology Inc.

NEWSLETTER

Volume 39 #4

December 2001

Registered by Australia Post
Print Post Publication No. PP 381667/00125
ISSN 1037-2512

AUSTRALIAN SOCIETY FOR LIMNOLOGY INC.

The Australian Society for Limnology (ASL) is an Australian-based scientific society whose focus is the study and management of inland waters. The ASL was established in 1961, and has a current membership of over 650 researchers, managers, engineers, teachers and tertiary level students from all states and territories. Members have a strong professional interest in inland aquatic issues, including the maintenance of biodiversity, the maintenance and/or restoration of water quality, and the wise use of aquatic resources. The Society also has a strong interest in fostering the scientific and intellectual development of tertiary students.

The Society includes members working in government agencies, tertiary institutions and many industries related to aquatic resources. Through their daily activities, members have contact with local communities and are in a sound position to interpret and advise on inland water issues. The Society has a substantial knowledge base, and has assumed a responsibility to ensure that this is available to those who manage inland waters.

Accordingly, the charter of the ASL is to further our understanding of Australia's inland waters and to promote their wise use and sustainable management. In this manner we will contribute to the continued existence of this valued resource and the maintenance and enhancement of the quality of life for all Australians.

The ASL regularly produces a newsletter with notes on limnological activities, articles of interest, book reviews and announcements of upcoming events likely to be of interest to Members.

EXECUTIVE OFFICERS 2001-2002

President
Dr Jane Chambers
Environmental Science, Murdoch University, Murdoch WA 6150
Ph: 08-9360 2739, Fax: 08-9310 4997, Email: chambers@essun1.murdoch.edu.au

Vice-President
Dr Andrew Boulton
Ecosystem Management, The University of New England, Armidale NSW 2351
Ph: 02-6773 3760 Fax 02-6773 2769, Email: aboulton@metz.une.edu.au

Immediate Past President
Dr Pierre Horwitz
Centre for Ecosystem Management, Edith Cowan University, Joondalup WA 6027
Ph: 08-9400 5558, Fax 08-9400 5717, Email: p.horwitz@cowan.edu.au

Secretary
Dr Richard Marchant
Museum of Victoria, GPO Box 666E, Melbourne VIC 3001
Ph: 03-8341 7433, Fax 03-9416 0475, Email: rmarch@mov.vic.gov.au

Treasurer/Membership Officer
Mrs Margaret Hart
22 Netherby Avenue, Wheelers Hill VIC 3150
Ph: 03-9545 3549, Fax: 03-9545 3549, Email: margaret.hart@sci.monash.edu.au

CONTENTS

CONTENTS	3
EDITORIAL	5
PRESIDENT'S REPORT	7
WEBMASTER'S REPORT	7
LETTER TO THE EDITOR	8
SCUTTLEBUTT, RUMOUR AND A BIT OF PRATTLE	9
Australian Water Quality Centre	9
Centre for Catchment and In-Stream Research, Griffith University	10
CSIRO Land and Water	11
WSL Consultants	14
Adelaide Uni. Dept. Geographical & Environmental Studies & Diatoma	15
Ecosystem Management, University of New England	16
Environmental Research Institute of the Supervising Scientist	17
National Centre for Tropical Wetland Research	20
Centre for Water Research, Dept. Env. Eng. UWA	21
Murray-Darling Freshwater Research Centre	23
CRC for Freshwater Ecology	25
University of Canberra	27
ECOWISE Environmental	28
Aquatic Group within Env. Services Hydro Tasmania	29
Freshwater Ecology, Arthur Rylah Inst. for Env. Research	30
SPECIAL DEAL - ASL CONFERENCE T-SHIRTS AND CAPS	33
INFORMATION FOR MEMBERS	34
ANNUAL GENERAL MEETING MINUTES	36
DOOR PRIZE REPORT 2001	45
14TH TAXONOMIC WORKSHOP (5 AND 6 FEBRUARY 2002)	47
FASTS	51
Evaluation of SmP Day	51
Report on Universities Welcomed	57
Demand for Maths and Science Teachers Hotting Up	58
Minchin vs. Evans Science Policy Debate Is On!	59
ALP Policy Announcement	60
Minchin vs. Evans Debate	61
FASTS Welcomes New Science Ministerial Team	62
ARC Expert Advisory Committees	63
FASTS Circular November-December 2001	64
A POSTCARD FROM THE FREE MARKET	68
ARTICLES	71
NEW BOOKS	73
BITS AND PIECES	77
FORTHCOMING CONFERENCES/WORKSHOPS	87
ASL VOLUNTEERS	90
ASL MEMBERSHIP FORM	93
ELECTRONIC NEWSLETTER APPLICATION FORM	95
REGIONAL EXECUTIVE MEMBERS 2001-2002	96
EDITORIAL ADDRESS	96

Material for publication in the **Volume 40 # 1 Issue** of the Newsletter should be sent to the Editor (Address on back page) **by Thursday 28th February 2002.**

Volume 40 # 2 contributions due Friday 31 May 2002.

All articles should be forwarded, if possible, as unformatted text on a disk or via email.

ASL Home Page - http://www.asl.org.au/

This Newsletter is printed by Border Multi Print Pty Ltd Wodonga, packaged by Kalianna Pty Ltd and distributed by Australia Post.

Membership Information and a list of the Regional Executive Members can be found at the back of this Newsletter.

EDITORIAL

Welcome to the Christmas 2001 issue of the ASL newsletter.

Nice to meet a lot of the members at the Congress and yes, I still owe you a beer Simon!

Phil Papas from Freshwater Ecology, Arthur Rylah Institute for Environmental Research, Department of Natural Resources and Environment, Victoria is the winner of the Inaugural ASL Chocolate Frog Award for being the first member to submit an article for the next edition of the newsletter (after I've sent around a gentle reminder to members). In addition, it's nice to know there is an organisation out there will a longer title than The Murray-Darling Freshwater Research Centre!

Happy reading.

Merry Christmas to one and all, hope it's a good one.

Cheers

Rhonda

PRESIDENT'S REPORT

Hi all, Hoping you are all starting to slow down from the flurry of activity that seemed to hit everyone after the ASL congress and are looking forward to some suitably salubrious seasonal celebrations. This last congress was a winner thanks in large part to the excellent organising committee: Rhonda, Michael, Sabine, Mike and Margaret really excelled - thanks all. Bit of a high profile congress, with myself and three members being interviewed by ABC radio about the congress and limnological issues; after a press release penned by Time Doeg captured their attention.

There were some excellent focussed sessions on science and current issues and linkages between the two, with a great deal of momentum from those that attended the AWF, carrying ideas through into the congress. Not surprisingly considering the congress location, the Murray-Darling was high on the agenda and some great initiatives came from that e.g. I shall be forwarding a letter shortly to appropriate government offices regarding water allocation in the Murray-Darling, drafted by Terry Hillman. Although it is entirely possible that I might modify his wording, as in Terry's own inimitable style, the draft began: "Dear Minister, Sorry about last Friday night, I may have had one too many. I still maintain, however, that you do have lovely eyes and they can be quite distracting. It won't happen again.....". It then became quite scientific.

The inaugural student mixer kicked off proceedings this congress and was a great start. Hey, I enjoyed it and really appreciated being able to catch up with students throughout the congress having met them first off. Thanks Andrew for organising this and if anyone has any feedback on this idea please pass it on to Andrew Boulton (email address at the front of the book under Vice Pres.). Richard Marchant was sorely missed (especially by me, who needed him to keep me on the straight and narrow for the AGM). He was probably just being shy (actually was OS) as he won the ASL Medal and together with Margaret Hart, an honorary life membership. Both Richard and Margaret have been the backbone of ASL for many years and I very much enjoyed being able to show our thanks and appreciation.

Aaaargh this is getting long and Rhonda will be after me. I'll speed up... Pierre Horwitz is just about to print some truly awesome brochures and posters to promote the society - excellent Pierre - thanks for your efforts and to everyone who sent in photos - your contributions have really made a difference - wait until you see these. The ASL Early Career Achievement Award is being fine tuned at present but don't wait for the red tape to give some thought to possible nominees - I can think of several, I'm sure you know a winner. Abbie Spiers has left the Exec. to have a baby (v. poor excuse I reckon - all the best Abbie - you've been a tireless and excellent Exec. member) and we are very happy to have Frederick Bouckaert as the new NT rep. Welcome Frederick.

FASTS had its Council Meeting in November and as I was unable to attend, I sent input from ASL in regard to their Top Ten Issues and in particular their initiatives to improve communication between scientists and government policy. FASTS are also offering workshops in areas to improve the efficiency of societies in a number of areas and I put forward that these might be useful if they could be held before or after our next congress. FASTS and myself are also seeking ways to enhance the Science meets Parliament day. If anyone has any ideas on this please contact me.

Okay Rhonda, okay I'm going..... Next congress the vineyards, ... er streams of Margaret River in WA. See you there! Meanwhile 'ave a good Chrissie!

Cheers, Jane (December 1st, 2001)

WEBMASTER'S REPORT

ASL NEWSLETTER PASSWORD

I am changing the newsletter password for next year - 2002 - (mainly to make it difficult for those who aren't members and who have managed to get themselves the password).

The new password will be:
limno58

the logon name will stay the same

Can you put this info in the next two newsletters please (December 2001 and March 2002)?

Simon Josey, ASL webmaster

EMAIL ATTACHMENTS

I've had a couple of complaints from subscribers to the ASL email list who object to having to download large attachments when they are embedded in posts - as they pay for a dial-up service.

Unfortunately, the email list does not have a setting to remove attachments from posts, and so it falls to subscribers to follow these guidelines when posting.

* do not post attachments to the list
* if you want to send an attachment, either
  1) copy and paste the attachment text directly into the email instead
  2) place the attachment at a location on the web and post a link if subscribers want to read it
  3) email the attachment to webmaster@asl.org.au and I will place it temporarily at the ASL website location and then send you a link that you can then forward to the list

There is also the possibility of moving the list to yahoogroups which does have an option of automatically removing attachments from the posts – but only if these guidelines do not appear to be working and if the majority of subscribers agree. Any feedback or suggestions from subscribers would be appreciated.

Simon Josey, ASL webmaster

LETTER TO THE EDITOR

Letter received 15 November 2001 from Frank L Burns Consulting Engineers (Specialising in Lake and Reservoir Water Quality Control).

ACEA 2001 Excellence Award to a Limnology Project

At the Association of Consulting Engineers Australia (ACEA) Awards for Excellence Dinner held at the ANA Harbour Grand Hotel, Sydney on Friday 9 November 2001, the attached limnology project which I carried out for the Norske Skog Albury Paper Mill received a Silver Award (2nd highest in the Environmental Section) together with the Year 2001 Award for the best Sole Practitioner's project.

As an engineer and long term member of ASL, I consider these awards to really belong to the ASL where the members efforts to educate me in limnology matters over many years have at last borne fruit. They are an indication of the increasing recognition by the engineering profession of the value of limnology in solving practical engineering problems and as such auger well for the future cooperation of these two important disciplines.

The full details of this project can be found in a paper I presented at the 19th Federal Convention of AWA in Canberra in April 2001 and published in the CD-ROM proceedings. I would be pleased to send a copy of the paper to any interested members who have difficulty in accessing the proceedings.

Yours Sincerely

Frank L Burns
Consulting Engineer
Email: fburns@ozemail.com.au

~~~~~~~~~~~~~~~~

SILVER

ENVIRONMENTAL PROJECTS

HIGHLY COMMENDED

PROUDLY SPONSORED BY WILLIS

AUTOMATIC AERATION OF WASTE-WATER STORAGE (NSW)

FRANK L BURNS, CONSULTING ENGINEERS

CLIENT

NORSKE SKOG PAPER MILLS (AUST) LTD

SOLE PRACTITIONER AWARD

The project provided an effective and economic engineering solution to the problem of water quality deterioration in a stratified industrial waste-water storage system used for pine plantation irrigation in Albury, NSW.

Significant Aspects

The viability of a $10.4 million waste water re-use scheme, utilising industrial waste water from Norske Skog Paper Mills (Australia) for pine plantation irrigation was threatened by biological growth and filter blockages during storage.

The installation of a $34,000 automatic aeration system and the implementation of a water quality monitoring programme provided innovative and simple solutions.

This project demonstrates how simple and inexpensive engineering solutions can be applied to ensure the continued viability of a multi-million dollar operation.

Judges' Comments

- The consultant adopted an innovative, cost-effective and simple aeration scheme to ensure that re-used wastewater from a newsprint mill operation remained usable during extended periods of storage.
~~~~~~~~~~~~~~~~

SCUTTLEBUTT, RUMOUR AND A BIT OF PRATTLE

AUSTRALIAN WATER QUALITY CENTRE
AQUATIC ECOLOGY & BIOMONITORING SUB-UNIT
BOLIVAR, SOUTH AUSTRALIA

New WWTP impacts projects have started:- monitoring water quality and bugs. A moderately saline creek flowing into the Coorong has been surveyed for the Department of Environment and Heritage. The creek periodically carries water from a large drainage scheme designed to reduce salinity in agricultural areas. The midge population of our local Bolivar WWTP effluent lagoons is being monitored by **Chris Madden**. **Darren Hicks** has found 3 native fish species can survive in the same lagoons despite very low DO at dawn. Waterwatch SA sought our expertise to assist on 10 days during the annual Snapshot event. **Peter Schultz** and Paul attended training courses on presentation skills. Given the heightened security concerns, both Darren and **Tracy Venus** were asked to contribute advice on the design of in-line monitoring systems for water supplies. Local security at AWQC was breached recently by an unscrupulous fellow who made off with a solar hot water system from our product testing store. By now he may have discovered that it was an LPG model, and that parts had been removed for testing!

Releases of chlorinated water from large trunk mains were sampled to determine the impact on macroinvertebrates. That formed part of the construction of a scheme providing water from the Murray for vineyards in the Barossa. Vinuous members of the group may have to alter our wine purchasing patterns! The cessation of chlorination in trunk mains is being investigated to see if there are problems with Bryozoa, mussels and other encrusting animals. The potential for inter catchment transfer of animals will also be investigated.

Work has commenced on the Marne catchment Environmental Water Requirements for **Kerri Muller** at the River Murray Catchment Water Management Board. Included in the Technical Panel is our esteemed free marketeer **Tim Doeg**. **Chris Madden** and **Paul McEvoy** attented the 5th Invertebrate Biodiversity & Conservation Conference at Adelaide University. They presented a poster by the group on notable invertebrate records from our survey work and oral presentations on conservation of streams and influences of salinity on aquatic biodiversity.

From

Paul McEvoy

CENTRE FOR CATCHMENT AND IN-STREAM RESEARCH, GRIFFITH UNIVERSITY, BRISBANE

Frances D'Sousa and **Fiona Balcombe** have been busy at the ARI labs in Yerongpilly working on alkane extractions from Cooper Ck floodplain soils. This project will contribute to **Stuart Bunn's** EFI work on carbon dynamics of rivers and their floodplains. **Frances** recently finished up at CCISR to take up her new position as Science Coordinator, Ecosystem Health Monitoring Program, at EPA. Meanwhile **Fiona** is continuing on with this work.

Claire Mckenny, **Andrea Schmidt** and **James Udy** have returned from the successful second (and probably final) round of sampling their enrichment and shade experiment. **Andrea** and **James** are investigating the influence of enrichment by various nutrients and light on algal communities and macrophytes. **Claire** is investigating the influence of productivity and composition of algae on grazer diversity and composition. **James** had been celebrating his "last ever field trip", which due to anxious questioning by his next employer had to be hastily revised to "last ever freshwater field trip". **James** is leaving CCISR at the end of this year for warmer and saltier waters. He is returning to University of Queensland to take up his new position as the Director of a new course (College at Sea) which involves lots of sailing around on the Great Barrier Reef, and teaching aspiring new marine scientists. His first job requirement is to sail off to Tahiti to learn the ropes.

Samantha Capon has set up the new CCISR Intranet site, which allows us all to keep up with the day to day gossip and, occasionally, matters of a more serious note. On the gossip line, congratulations are in order for **Nick Marsh** who has handed in his PhD thesis (or will by the time this goes to print), and along with wife Bonny will be expecting their first child in April. Also congratulations to **Christie Fellows** and **Wade Hadwen** who recently announced their engagement.

The CRCFE Dryland River Refugia team arrived back safely from their latest trip to work on Western Queensland rivers. The sampling involved sites in both Cooper Ck and the Warrego River. These were the same 15 Cooper Ck sites sampled in April, plus a further 15 new sites from the Warrego catchment. The highlight of the trips was the unearthing of some potential models, resulting in a "refugium calendar", which was officially launched at the recent CRC AGM in Albury.

From

Stephen (Harry) Balcombe

CSIRO LAND AND WATER

Water Prize

CSIRO Land and Water scientists' work on water 'banking' has been honoured internationally with the awarding of the inaugural UNESCO International Water Prize for Innovation in Water Resources Management in Arid and Semi-Arid Areas.

The prestigious US$20,000 prize, named 'The Great Man-Made River International Water Prize' has been awarded to the research group studying aquifer storage and recovery of CSIRO Land and Water and the Department for Water Resources, South Australia.

Heartiest congratulations to Peter Dillon, Paul Pavelic, Karen Barry, Simon Toze and Jon Hanna from CSIRO Land and Water and Russell Martin, Bryan Harris, Zac Sibenaler, Nabil Gerges, Kevin Dennis, Brian Traeger and Phil Patterson from the Department of Water Resources.

The research explores the use of aquifers to store urban stormwater and reclaimed water for re-use in irrigation. Since 1997, the research group has been developing the ability to store water reclaimed from sewage effluent in aquifers in winter to meet irrigation demands in summer. This work has increased our understanding of:

* biological, physical and chemical clogging processes, their inter-relationships and means of control
* methods for measuring survival of pathogens in aquifers
* the use of isotopes to evaluate geochemical processes in aquifers subject to injection of these waters, and
* methods to characterize hydraulic properties of aquifers, the mixing of water within aquifers, and to predict the fate of stored injectants.

The research group already has six fully operational sites of aquifer storage and recovery operating in the vicinity of Adelaide, others in investigation phases around Australia, that when completed, will greatly expand installed capacity, plus several international-scale research projects on water banking with reclaimed water and drinking water underway.

The group has run training courses in several countries and will host ISAR4 - an international symposium on 'management of aquifer recharge for sustainability' in Adelaide from 22- 26 September, 2002.

First global reference basin - Lower Murrumbidgee

Dr Mike Bonnell, Director of HELP programme, UNESCO has approved the Lower Murrumbidgee to be been given the status of first global reference basin within the Hydrology for Environment, Life and Policy (HELP) international network. Congratulations to Shahbaz Khan and the Griffith team.

This is in recognition of the progress being made by natural resource managers, the community and scientists in Australia working together to tackle the multiple environmental, economic and social challenges of natural resource management in catchments. As a result, the Lower Murrumbidgee Catchment will be under the world spotlight and will be increasingly visited by international scientists and resource managers. UNESCO is already proposing with Shahbaz an international conference to be held in the catchment in early 2003.

HELP is founded by UNESCO and WMO as a global network of catchments with emphasis on "real people, real catchments, real answers." HELP is a problem driven and demand responsive initiative looking for strong community based hydrological research. Catchments to be part of HELP need to fulfil the HELP criteria for baseline physical and socio-economic data exchange and provide adequate local capacity to further the program. The benefits of inclusion are access to new data acquisition and analysis methods, sharing of expertise, access to data and findings from the other HELP catchments, and opportunities for funding and building capacity in water institutions.

The Lower Murrumbidgee catchment provides an excellent example of community involvement in hydrological research and development of integrated catchment management policies using a range of tools. The Lower Murrumbidgee Catchment serves as an example of a catchment under competing water uses and environmental and economic concerns in an arid zone which are similar to many other catchments in the world.

A range of innovative hydrologic, integrated hydrologic economic and community education tools commonly known as SWAGMAN (Salt, WAter and Groundwater MANagement models) have been developed by CSIRO for natural resource management. These models and community participation activities can be readily adapted for use in other parts of the world and can therefore facilitate technology transfer.

The modelling tools and participatory hydrologic research methods used in the Murrumbidgee Catchment have been earmarked to be used by communities in Zhanghe Irrigation Area along the Yellow River, Liuyuankou Irrigation Area along the Yellow River in China and Rechna Doab in Indus Basin, through the Australian Council for International Agricultural Research (ACIAR) on-going projects. There is also considerable interest in applying these hydrologic economic tools in the Indian and South African Catchments.

Congratulations to Mike Raupach et al

A paper on terrestrial carbon exchanges and sinks appeared in Nature on November 8 authored by 30 scientists from around the world including four Australians. One of the Australian authors was Mike Raupach.

The paper published in the journal Nature provides a new global view of terrestrial carbon sources and sinks and warns that current sinks cannot be counted on to mop up carbon dioxide emissions indefinitely.

The results have potential implications for the Kyoto Protocol negotiations where recent difficulties have included a lack of scientific knowledge about the strength and distribution of carbon sinks and how they vary from year to year.

Produced by a team of 30 leading carbon scientists from around the world, the paper draws on a large body of research to build up a new and comprehensive picture of carbon sinks on land.

The report states that carbon sinks of today's magnitude cannot be relied on to operate steadily into the future because the key processes that give rise to the sinks in the first place are temporary and likely to diminish with time.

One of the key points of the report is that a large part of the current Northern Hemispheric sink is likely to have been caused by relatively recent changes in land use and land management. For example, the North American carbon sink is thought to be primarily the result of forest regrowth after the abandonment of agricultural land during the 1980s and 1990s together with a reduction in the frequency of wild fires. In China and Europe, carbon sinks are also thought to be due to a recent increase in tree growth through reforestation programmes and improvements in forest management.

As a forest re-grows after disturbance or through active planting programmes, significant amounts of CO_2 are absorbed. However, once a forest matures, the amount of CO_2 absorbed is roughly equal to the amount released, thus the sink will diminish with time as forests mature.

The paper represents a major advance in terms of reconciling two different approaches to measuring the strength of carbon sinks and sources. Historically, researchers have used two types of measurements: 1) direct measurement of CO_2 in the atmosphere, and 2) on-the-ground measurements on the basis of forest growth and soil uptake etc. In this study the authors show that, on the broad scale, these two approaches provide consistent results, though still with significant regional uncertainties.

From

Marg Bryant

WSL Consultants – Aquatic Ecology

The WSL Biology lab welcomed back our resident explorer, (read psycho), **David Bryant** after his 3 month bicycle journey through northern Western Australia and the Northern Territory. Returning with his long hair cut off and a mountain of stories, David just loves having the chance to settle back into a microscope and get stuck into a nice collection of samples. I guess after abandoning us in the middle of winter, he deserves all the best, biggest sweep samples we can find to give him a chance to share all his anecdotes with the lab. And boy do we have some whoppers of samples for him.

Kylie Swingler has been poached from the Biology lab by the mainstream workings of WSL to develop her skills in major project management. She is presently learning the workings of WSL's other departments. **Alistair Cameron** enjoyed a well earned 3-week holiday heading west of Melbourne to the Glenelg River. It seems the fishing was average and the surf was worse, but not a computer or diary to be seen. Perfect! Al has been sorting out our spring field season and is looking forward to doing some new fish surveys in South Gippsland.

Dan Vertessy, Al and Dave have been assessing the health of the Moonee Ponds Creek Catchment for Melbourne Water. The project is an expanded continuation of the assessment of the catchment after surprising results from last year when the macroinvertebrate diversity of artificial riffles in a concrete lined channel was relatively high. Dan and **Patrick Maiden** have also completed the pre re-snagging sampling events in the Little Yarra River. Post re-snagging sampling events will enable a comprehensive assessment of the re-snagging programme as it relates to aquatic macroinvertebrates.

On going compliance monitoring programes are maintaining the workload for the bug staff. The assessment of Wastewater Treatment Plant discharges and irrigation drains, as well as obtaining baseline data for the shifting of Moonee Ponds Creek estuary form the basis of this work. The assessment of sediments and macroinvertebrates from a highly impacted urban wetland and industrial drain make the WWTP monitoring programmes appear as the pinnacle of fieldwork.

The Algae lab is getting busy as usual for summer. **Gosia Pryzbylska** has joined us from MDFRC and La Trobe Uni, Wodonga, and has taken on the role of Manager of Algology. Congratulations to **Hugh Richards** on his wedding in late November. He has taken an extended honeymoon and will be back in the lab in the new year. **Karen Simonsen** and **Anne Chuang** will be on the microscopes all summer, performing the massive amounts of algal analyses required over summer.

From

Patrick Maiden

Adelaide University Department of Geographical & Environmental Studies & Diatoma

Plus ca change.....The upshot of all the proposed moves and mergers is that I move my office down the corridor and Diatoma moves four metres closer to the Adelaide Oval! One move of note, however, is that **Sophie Bickford** passed her PhD with flying colours and has taken a 3 year CSIRO post-doc based at the Botanic Gardens in Canberra. Stay tuned to edition two of the best restaurants in the national capital.

Honours students, **Cameron Barr** (300 year salinity reconstruction of a wetland on the Markollat watercourse, SA), **Gus MacGregor** (Holocene reconstructions of salinity on the Snowy floodplain, Vic) and **Louise Mutton** (diatom biomonitoring of acid mine seepage in Settlement Creek, NT) all earned firsts. **Sorell Bulpin** and **Craig McVeigh** are pressing on with their PhD work on water quality reconstructions from the Murray Basin and Brazil respectively. **Cameron** & **Gus** join Diatoma along with **Stephane Gabas** whose metamorphosis continues as he turns his hand to diatom taxonomy. **Craig** & **Chris Graves** are putting together a report for the Murray Water Board on rehabilitating the Cobdogla basin. **Craig** also has the enviable task of settling out Torrens River 'solids' to characterise the catchment sediment as part of a project with CSIRO Environmental Hydrology for the Torrens Catchment Board on the water-sediment history contained in the Kangaroo Creek reservoir.

From

Peter Gell

ECOSYSTEM MANAGEMENT, UNIVERSITY OF NEW ENGLAND

As 2001 draws to a close, so do some momentous events. The first is the submission of **Sandra Grinter**'s PhD on longitudinal changes in fauna and organic matter along three coastal streams that exit forest and flow into cleared land. Despite multiple jobs and distractions, **Sandra** has soldiered on and the thesis is a solid testament to her tenacity - well done! Also winding down is the Large ARC-funded research project on the hyporheic zone that has seen a cast of tens, and funded researchers and students from France, Switzerland, The Netherlands, Spain, New Zealand and the States. The project has spawned a number of Hons theses, and generated some interesting spin-offs including an experimental test of the Flood Refuge Hypothesis, the discovery of a plethora of hyporheic water mites, several manipulative experiments involving the effects of drying and desilting on the hyporheos of stream reaches in two coastal rivers, as well as some management advice for river managers dealing with gravel bed rivers.

Andres Diaz (Murcia University) has commenced his research project that entails diverting flow from a stream section and assessing effects on the hyporheic fauna compared to control sites where flow remains stable. This ties in with **Marcus Finn**'s work on ecological responses of surface fauna and it will be interesting to see if there are similar changes or whether subsurface flow maintains adequate conditions for the hyporheic fauna. Also harassing the hyporheos is **Phil Morris**'s project on desilting two large reaches of the Never Never River in upwelling and downwelling zones to track recovery (and natural resiltation) of the interstices. After helping **Phil** with his fieldwork, most of the lab cannot lift their arms above their heads and mutters of 'premature aging' have been heard. **Dean Olsen** (Uni of Otago) found himself drawn straight into the field work but also found time to discuss differences in freeze-coring technology across the Tasman and to marvel at **Peter Hancock**'s energy on a "vague-un" diet, with and without ear-freshener. **Dean** picked up the lingo fast and soon learned not to refer to eskies as chilly-bins.

Peter Berney has handed in his Masters thesis on the use of oral history as a catchment management tool in the Brunswick Catchment. There are plans to produce a small book from the thesis with support from **Patrick Pahlow** of the local DLWC. Regional interest has been substantial and this looks like a handy addition to catchment managers' arsenals. Otherwise, things at UNE continue happily as usual, enriched by further excuses for parties (Christmas, New Year) that are tantalisingly close.

From

Andrew Boulton

ENVIRONMENTAL RESEARCH INSTITUTE OF THE SUPERVISING SCIENTIST (*ERISS*)

Jabiru and Darwin News

Hydrological and Ecological Processes

This is a new ***eriss*** program formed on 1 July 2001 through the amalgamation of the Erosion & Hydrology and Wetland Ecology & Inventory programs. The program is undertaking international studies in wetland inventory and local studies in stream catchment characterisation. The local catchment studies are being conducted in the Ngarradj catchment which contains the Jabiluka mine site. Ngarradj is a major right-bank tributary of Magela Creek in the World Heritage listed Kakadu National Park. Gauging stations have been established upstream and downstream of the mine in Ngarradj and on the main un-impacted right-bank tributary. The gauging stations have been in place for three years and data are becoming available to characterise stream sediment concentrations and hydrology for impact assessment and catchment management. The stream channels are also being surveyed for stability and the spatial distribution of fires in the catchment is being mapped to assess the effects of fire on sediment loads. The program uses GIS, dGPS and landform evolution modelling tools as part of the impact assessment and management of the catchment.

Ecosystem Protection

The new mine monitoring group is getting out of the starting blocks, ready to tackle the monitoring programs recommended by the World Heritage Commission to keep a close watch on streams surrounding the Ranger and Jabiluka mines. Protocols are being finalised for monitoring macroinvertebrate and fish community structure, creekside monitoring (toxicity tests using egg fecundity of the snail *Amerianna cumingi* and the survival rate of larval fish *Melanotaenia nigrans*), monitoring water chemistry and bioaccumulation monitoring of fish and mussels. The programs have recently been presented to the newly constituted Alligator Rivers Region Technical Committee.

Wayne Barbour has recently joined this monitoring team and is learning to identify the 30 odd local fish species in the field, a skill handed over to him by **James Boyden,** and helping to get the creekside monitoring labs set up and running again in time for the first steady flow (which has happened as this message is being composed!). Welcome to **Duncan Buckle** who will be assisting in processing macroinvertebrate samples for the next several months. He is receiving his training by **David Norton** and his eyes are slowly adjusting to a focal length of 35 cm rather than the infinity he was used to as a Kakadu tour guide.

Meanwhile, chemistry data have been collected from the 'front' (first-flush) of Magela and Gulungul creeks that reluctantly started flowing after the recent rains. The samples are analysed for a suite of metals, sulphur and phosphorus, to determine whether any deposited contaminants are being picked up in the first flush. The results on conductivity so far seem to indicate that with subsequent sampling, conductivity is reduced as the first flush is followed by fresh water from further upstream.

As part of more landscape scale analysis of mining impacts recommended by the WHC a study of fish community structure along Gulungul Creek was carried out to compare with data collected in the 1980s. The work involved visual counts by snorkeling and was done by **Keith Bishop** and a team of crocodile spotters. Preliminary results of the study indicate that there is very little difference in fish community composition between 1978 and 2001 at Gulungul Creek, both overall and also in comparisons of sites upstream and downstream from the Ranger mine lease boundary.

The numbers of *Njarlgan* (archerfish) and *Burd* (spangled grunters) in the creek have declined over time (1978 to the present). However, ***eriss*** has other data to show that long-term declines and increases in certain fish species, such as archerfish and spangled grunters, are not unusual in creeks of Kakadu, including creeks unaffected by mining. Small increases in magnesium sulphate that have been detected in Gulungul Creek therefore appear not to have had a significant effect on the species richness and abundance of the native fish.

Bob Pidgeon is now working with the mine monitoring group to coordinate the various monitoring and reporting procedures and oversee the fish monitoring work. He recently got his feet wet again with a small natural fish kill in a billabong on the Ranger mine site. This event got the whole monitoring group into action and provided a nice test of our ability to respond rapidly with our staff mixed between Darwin and Jabiru. The staff side worked well but we found a few equipment problems that need to be rectified. It was interesting that, like the fish kill Bob talked about at the Darwin ASL meeting, this kill was also facilitated by bioturbation, but this time mainly from feral pigs ploughing up the shallow margins and *Eleocharis* beds which greatly increased the turbidity and BOD.

As well as managing the Ecosytem Protection section at ***eriss***, **Chris Humphrey** is still involved with the ANZECC & ARMCANZ Water Quality Guidelines. Chris and **Graham Batley** and his team from CSIRO have been commissioned by the Australian Centre for Mining Environmental Research (ACMER) to prepare a handbook for the minerals industry on its practical implementation. The handbook is expected to be completed by March 2002.

Clint McCullough continues his work on his PhD looking at the ecological effects of magnesium sulphate ($MgSO_4$) on Magela Creek. As reported in the last newsletter, this year involved deliberately spiking drying pools of the Magela Creek (in the Dry Season before all water in the creek disappeared) with a geometric series of $MgSO_4$ concentrations, sampling both macroinvertebrates before and after spiking, along the lines of a BACI experimental model. That fieldwork was successfully completed for this year and now many *happy* hours of sorting in the lab over the wet season are yet to be fulfilled before results can be realised.

In conjunction with Clint's project **Caroline Camilleri** and **Alicia Hogan** of the **Ecological Risk Assessment** group have progressed with the $MgSO_4$ toxicity testing mentioned last newsletter with the run of tests using fish, cladocera, hydra and unicellular algae nearly complete. The hydra results were of particular interest with population growth being inhibited as low as 11 mg/L (more than a factor of 15 lower than for any of the other test organisms). An overview of this $MgSO_4$ study was presented in Darwin late November at the Earth, Water, Land Sciences (EWLS) seminar series.

The **Ecological Risk Assessment** group has undergone a significant change in the last three months with our program leader **Rick van Dam** taking up a new position as Director of the Sinclair Knight Mertz ecotoxicology laboratory in Sydney. He did, however, leave the research program in an excellent state for the continuation of testing until his position is filled early in the new year.

The results of the project investigating the reduction of aluminium toxicity by silica to tropical freshwater fish has been accepted by the journal Chemosphere. Also published recently in the journal Environmental Toxicology was honours student **Michael Semaan's** research comparing the sensitivity of three populations of the cladoceran *Moinodaphnia macleayi* to acute and chronic uranium exposure.

Due to major management changes at Ranger mine, the ***eriss*** ecotoxicology lab has again been asked to undertake the pre-release testing of water from Djalkmarra Billabong on the Ranger mine site. We have come full-circle in that the pre-release toxicity testing procedures were developed by ***eriss*** and handed over to the mining company to carry out several years ago. Testing will take place during December. The group has also recently been approached by the mine to assess the toxicity of water produced by an innovative process water treatment pilot plant being trialed at Ranger, to assist in management of the mine's waste water. These tests are also earmarked to be carried out in December.

From

Abbie Spears

National Centre for Tropical Wetland Research (NCTWR)

Since last reported in the ASL newsletter, the northern Australia based NCTWR has taken a leap forward in the last few months thanks to a joint Masters program in Tropical Wetlands Ecology and Management that is to being developed by **Richard Pearson** (JCU), **Greg Hill** (NTU) and **John Dodson** (UWA), a number of important research projects having been secured and the publication of materials needed to promote the organisation.

The joint Masters program will enable students from NTU, JCU and UWA to undertake units along wetland themes compatible with units offered at the other partner institutions. Initially, existing courses will be used with the opportunity to offer units in flexible mode in future. The joint initiative could be on offer by mid-2002 and will be a very attractive proposition for national and international students.

Opportunities for collaboration with agencies actively seeking wetland training opportunities for wetland managers and students in the Asia–Pacific region are also being pursued.

On the research front, the NCTWR will be playing a leading role over the next few years in the Southern Gulf environmental information program, the establishment of the ecological character of several Ramsar sites in the Top End (in collaboration with MainStream Environmental Consulting), the development of the Asian Wetland Inventory (in collaboration with Wetlands International) and the Ramsar wetland inventory protocol. We welcome contact from other agencies interested in wetland research collaboration.

The new NCTWR website is now online – please visit us at http://www.nctwr.org.au. Feedback about our web site is most welcome, and we also invite you to link to our site.

Our Director, **Max Finlayson**, has been out and about lately (of course!) – he recently attended the 2nd Freshwater Aquatic Ecosystems conference in Townsville and gave a joint presentation with **George Lukacs** (ACTFR). Max also gave a seminar on the NCTWR and met with stakeholders in the north Queensland region. We intend to forge stronger linkages between NCTWR and other wetland research agencies in future, to assist in our joint efforts towards effective conservation and management of tropical wetlands.

And last but not least, World Wetlands Day – 2 February – is fast approaching. To celebrate wetlands and the signing of the Ramsar Convention almost 31 years ago, the NCTWR and the NT Environment Centre are hosting a 'People and Tropical Wetlands' seminar and field trip on 8 and 9 February 2002. All are welcome to attend. See our web site (http://www.nctwr.org.au) for more information.

From

Abbie Spears

CENTRE FOR WATER RESEARCH, DEPARTMENT OF ENVIRONMENTAL ENGINEERING, UNIVERSITY OF WESTERN AUSTRALIA

Recent visitors to the Centre have included **Professor John Melack** from the University of California Santa Barbara, **Associate Professor Paul Bukavechas** form the University of Louisville and **Dr Alon Rimmer** from the Kinneret Limnological Laboratory in Israel. **John Melack** worked with CWR academics and postgrads on integrating models of lakes and their catchments and on modelling the zooplankton of Mono Lake using DYRESM-CAEDYM. **Paul Bukavechas** has been working on DOC sources and sinks in the Swan River and **Alon Rimmer** continued CWR's links with Lake Kinneret, working on saline seeps to the lake.

Professor Jorg Imberger has been busy travelling Europe recently including the University of Stuttgart where he delivered a week long course on vertical and horizontal transport processes in inland waters. In The Netherlands, at the Institute for Inland Water Management, he delivered a talk entitled "Modelling the ecological response to artificial destratification" and he also attended a mini-symposium on water quality modelling at the University of Amsterdam. In Italy he met up with CWR Ph.D. student **Claire Spillman**, who is working on modelling bivalve distributions in Barbarmarco Lagoon.

In November, **Dr David Hamilton** attended the 9th Conference on Conservation and Management of Lakes in Japan. He was invited by Professor Shoji Fukuoka of Hiroshima University to give a talk at a special workshop session entitled "Flow and Water Quality in Lakes". The workshop gave participants an opportunity to discuss Lake Biwa as well as coastal Japanese lakes that are strongly stratified due to salt wedges.

Dr Barbara Robson has been working on the development and calibration of the hydrodynamic-ecological model ELCOM-CAEDYM for the Swan River and will now focus on modelling W.A. wetlands as part of the project "Predicting wetland response to changing water quality and quantity". The estuary modelling project is now at a stage where management scenarios are being run. One scenario aims to validate the model's performance under extraordinary conditions, by simulating the 2000 *Microcystis* bloom. The second aims to reproduce phytoplankton succession during the 1996-1997 period. Barbara is also setting up an ELCOM simulation of Tomales Bay, California to examine hydrodynamics and nutrient transport within the estuary.

Alisa Krasnostein remains immersed in her Masters work on modelling using simple and easily obtainable data. She has so far concentrated on a number of wetlands on the Swan Coastal Plan, including Loch McNess and Lake Yonderup. The model she has developed for Loch McNess has been able to validate what was previously believed about the lake's hydrology. Alisa is now applying her model to other wetlands and plans to define non-dimensional numbers easily useable for classification schemes.

Kathryn Linge and **Terence Chan** are entering the final stages of writing up their PhD theses. Kathryn has been investigating arsenic and phosphorus contamination in the sediments of Lake Yangebup. Her findings will be used to help manage the lake in the future. She hopes to be finished by the end of the year. Terence has recently published in JMFR a paper on phytoplankton succession in the Swan River, and is in the last stages of modelling to complete his Ph.D.

PhD student **Roman Stocker** conducted drifter experiments in spring and summer of 2001 in Lake Kinneret, aimed at understanding the circulation in the lake during periods of stratification and strong wind forcing. He used a GPS tracked drifter newly developed at CWR by oceanography PhD student **David Johnson** and himself, using sampling frequency and precision that are ideal for lakes of medium size. Trajectories allow descriptions of the general circulation and horizontal dispersion mechanisms in the surface layers of lakes.

Richard Segal commenced a PhD investigating the solar salt ponds located at Shark Bay on WA's mid-west coast. The seawater-fed multi-pond system will provide an opportunity to study the changes in photosynthesis versus respiration rates and nutrient limitation of production along the salinity gradient. The ponds where gypsum precipitation occurs are notorious for extracellular polysaccharide (slime!) production by cyanobacteria which can be detrimental to salt production and quality.

For more CWR news, please visit www.cwr.uwa.edu.au

For current CWR postgraduate projects please visit:
www.cwr.uwa.edu.au/cwr/people/postgrads.html

From

Richard Segal

MURRAY-DARLING FRESHWATER RESEARCH CENTRE

Albury:

Gosia Przybylska moved to Melbourne in mid October and has taken on the role of Manager of Algology with WSL Consultants. All the very best in your new job Gosia.

David Crook, a CRCFE PhD student based at the MDFRC, was recently awarded the Australian Society for Fish Biology Student International Travel Scholarship for his manuscript "The influence of spatial scale and habitat arrangement on diel patterns of habitat use by two lowland river fishes". Information on the scholarship is available from Tony Miskiewicz (Tmiskiewicz@wollongong.nsw.gov.au). The manuscript was also recently accepted for publication in Oecologia. Congratulations Dave--happy travelling.

The "Waterlines – Studies in Irrigation" series of CDRoms for schools has been completed by **Mike Copland** (who was the Education Officer at the Murray-Darling Freshwater Research Centre for the past eight years) and the NSW Board of Studies.

"Waterlines" was launched by The Hon. Richard Amery, MP NSW Minister for Agriculture, and Minister for Land and Water Conservation, at Parliament House in Sydney last Thursday (11 October) and is described as "a contemporary resource containing a vast amount of information in text, image and video".

The three final CDRoms cover Cotton, Rice and Winegrapes and are co-sponsored by the Murray-Darling Basin Commission and the NSW Board of Studies. Their ease of use and information base makes them useful at all school levels.

The 2002 Taxonomic Workshop program has been finalised and will be held on Tuesday 5th and Wednesday 6th February 2002. The venue will Lake Hume Resort on the banks of the Murray River, near Albury.

The groups to be covered this year will be Hemiptera, Coleoptera, Syncarida, Ostracoda, Odonata, Ephemeroptera and Chironomidae. Another six Identifications Guides will be presented at the worshop.

The workshop program, with accommodation, registration and all other information can be found in this newsletter on pages 47 to 50 or by contacting John Hawking on (02) 6058 2340.

From

Rhonda Sinclair

Lower Basin Laboratory – Mildura:

We are all gearing up for a hectic summer in sunny Mildura with the calendar already looking full with field work planned for all projects. **Helen Missen** will have her work cut out for her just keeping track of us all and maintaining the home front.

Clayton Sharpe has been employed as a techo to help out over summer until he starts honours at the lab early next year. Clayton's honours will be supervised by our fish ecologist, **Shaun Meredith**, and will look at the growth rates of carp gudgeons at Lindsay Island.

There will once again be two scholarship students working at the lab over the summer. **Daniel Eyles** from the University of Melbourne will be conducting field work for our annual blue-green algae project. **Caroline Chong**, an Adelaide University student, will be working on the Menindee project.

Unfortunately, **Iain Ellis**, who has been working at the lab for the last three-and-a-half years, is leaving in early 2002 to travel overseas. Iain has been vital to the successful operation of the lab and will leave a big hole to fill. The gap will be covered by the resident tall freak, **Nick Whiterod,** (fish techo), until a suitable 'New Iain' is found. We wish Iain all the best for his overseas trip and also in his quest to become a 'rock star'.

Oliver Scholz, has returned from a trek in Nepal and will be kept very busy this summer with almost weekly field trips to the Menindee Lakes planned. Oliver will soon (if not already) know all the emus on the road between Mildura and Menindee by name.

The Euston weir pool drawdown project will keep **Bernard McCarthy** busy over the summer and **Michelle Bald** has been madly brokering knowledge to all those in need.

Ben Gawne is still riding the crest of the wave of glory following his recent accolade of the CRCFE's Chairman's Award for his outstanding contribution to freshwater ecology. Well done Ben!

From

Michelle Bald

Cooperative Research Centre For Freshwater Ecology

Peter Cullen Steps Down as Chief Executive of CRC for Freshwater Ecology in June 2002

Professor Peter Cullen, Chief Executive of the CRC for Freshwater Ecology, has advised the Board that he will not be seeking a further appointment as Chief Executive of the CRCFE once his present term concludes at the end of June next year. The Board has already established a Search Committee, chaired by Dr John Langford, the Chairman.

Professor Cullen has been involved in freshwater ecology research for 30 years and as founding Director of the CRC for Freshwater Ecology has been a tireless campaigner for water reform. He has contributed to the public understanding of the science behind such issues as environmental flows, dryland salinity and the ecological processes that sustain our rivers.

Professor Cullen has set a new benchmark for leadership in promoting the protection and restoration of the environment. Through the CRC, Peter has established various multi-disciplinary, collaborative approaches to environmental research relevant to a range of global issues such as conservation of biodiversity, water pollution and land degradation.

Professor Cullen has made an enormous contribution to the knowledge base upon which we as a society are able to make decisions about the management of our natural resources.

CRCFE Postgraduate Scholarships 2002

Up to six full postgraduate scholarships and six top-up scholarships will be awarded by the CRC for Freshwater Ecology in 2002. At least three full scholarships will be strongly focussed on water industry research needs, and there is an expectation of industry co-supervision or mentoring for these. Applications close 14 December 2001.

At least four scholarships will be awarded in priority areas, as outlined on the website. For further information, please visit the website at http://freshwater.canberra.edu.au; For further details or help with potential supervisors contact: **Prof. Gary Jones**: gjones@lake.canberra.edu.au

Wrap up from the Annual General Meeting

109 staff and students gathered together in early November for the CRCFE Annual General Meeting. The program was well organised, with a mix of stimulating presentations, group and project meetings and social events. Thanks to **Gerry Quinn**, **Kelly Barr** and everyone involved in presentations and meetings for making the event such a success. A few highlights:

- A Salinity Working Group has been formed to develop possible salinity projects.
- **George Warne**, General Manager of Murray Irrigation Ltd (MIL), gave a presentation on irrigation, irrigators and their perceptions of scientists. He spoke about what irrigators see as good science versus bad science and what irrigators want from science and scientists.
- The students' poster session was a great opportunity to talk with students about their projects.
- **Stuart Bunn's** presentation, "I wouldn't be dead for quids", was a big hit. The talk, gloriously illustrated with entertaining photos of staff and students in and out of the water on the latest Refugia Project fieldtrip, was very funny. A calendar of said photos can be ordered from Mr January, **Jon Marshall**; Email: marshallj@dnr.qld.gov.au

- Presentations by staff on a variety of topics, including Research, Project Management, Knowledge Exchange and the State and Future of the CRCFE, were a great way to catch up with what's happening across the CRC.

Winners of the Chairman's and Director's Awards Announced at AGM

Congratulations to **Ben Gawne** for winning the Chairman's Award in recognition of his outstanding contribution to the field of freshwater ecology. The expertise, skills and dedication Ben brings to his research and the management of the Lower Basin Laboratory are well recognised by the scientific community, the CRCFE and the local community.

Congratulations to **Richard Norris** who won the Director's Award for his spirited struggle with an international visitor over the ownership of a pillow. For some unknown reason, the University Apartment both Richard and the visitor were staying in were strangely bereft of pillows, not a state of affairs Richard was inclined to accept. He 'borrowed' a pillow from the visitor's room, only to have the resident knock on his door asking for the return of the prized pillow. Richard managed to keep the coveted pillow until the bitter end when his opponent won an undeserved victory by claiming that he had bought it himself. **Peter Cullen**, ably assisted by a brilliant script written by **Wayne Robinson**, had the audience rolling with laughter over this one.

From

Lynne Scalie

UNIVERSITY OF CANBERRA

New Web-based Graduate Certificate in Environmental Statistics

The School of Resource, Environmental and Heritage Sciences at the University of Canberra is offering a Graduate Certificate in EnviroStats in 2002. The course will provide the knowledge, understanding and practical skills in experimental design, sampling and statistical analysis necessary to work as a ecologist, environmental scientist or manager. The course is presented in the context of field and experimental ecology and available through the web, so you do not have to attend classes on campus.

For more information, visit the Applied Ecology Research Group's web site at http://aerg.canberra.edu.au/envirostats/ There you will find information on staff profiles, more detail on subjects offered, samples of course materials and you can register an expression of interest.

From

Arthur Georges

ECOWISE ENVIRONMENTAL

ECOWISE Environmental has recently opened a number of new offices in Queensland and NSW. The Brisbane office of ECOWISE was established 6 months ago and consists of a small multidisciplinary group of people working on a range of environmental consulting and analytical projects from Cairns to Sydney. More recently, offices have been established in Sydney, Gladstone (Qld) and Foster (NSW).

On the project front ECOWISE is about to begin a new macroinvertebrate monitoring project for the Sydney Catchment Authority. The SCA project requires the sampling of 28 sub-catchments with taxonomic analysis to genus level. The SCA operating licence requires this work to be undertaken as an indicator of environmental performance in the catchment. The project will be managed by **Garry Bennison** and will involve two field teams led by **Kim Clark** and **Simon Josey**. WATER ECOscience and HCS will be working jointly with ECOWISE to deliver the project. This program will provide valuable information on the health of the catchments aquatic ecosystems, while also providing data to enable the further development of the SCA AUSRIVAS model.

Simon Josey made it to the ASL congress this year in Moama and had a ball. As webmaster for the ASL website, he found it immensely satisfying to finally meet the ASL Executive and put names to faces.

Zoe Moore has been given the opportunity to spend more time on R&D, and is currently, among other things, doing a comparison of the settling and filtration methods of algae concentration.

Visalakshi Sen has recently started in the Biology section and is on a steep learning curve for the varied analysis and reports that are regularly undertaken.

The Biology section is also soon to submit to the Lower Molonglo Water Quality Control Centre, Canberra's sewage works, their macroinvertebrate monitoring report for the year 2000, as well as a quarterly report for ActewAGL's macroinvertebrate monitoring of the rivers upstream and downstream of their drinking water dams for environmental flows requirements.

From

Simon Josey

AQUATIC GROUP WITHIN ENVIRONMENTAL SERVICES HYDRO TASMANIA

People on the mainland may not realise, but Hydro Tasmania has an aquatic program to assist it with managing its extensive network of waterways in Tasmania. This program allows Hydro Tasmania to achieve the aims of its aquatic environmental policy which covers the areas of sustainable development, responsible environmental management, compliance with environmental policy and legislation, informed water management decisions, and review and reporting of environmental performance.

Environmental Services, part of the consulting arm of Hydro Tasmania, manages this program. **Mick Howland** heads this team of "aquababies" which include **Helen Locher, Dave Bluhdorn, Chris Bobbi, Greg Vinall, Helga Grant, Jackie Griggs, Stephen Bresnehan, Amanda Jones, Anita Wild, Andrew Jones, Mel Ellis, Mark Bantich** and **Kate Hoyle**. Last year the Aquatic program won an award from the Tasmanian Government for Environmental Excellence by a Business Enterprise. There are two recent additions to the team, **Mick Gregory** who is in the throes of finishing his PhD, and **Andrew Jones** who was previously with Tasmanian Sea Fisheries. **Mick** is coming on board to kick off the Environmental Flow program studies, which are currently focussed on the South Esk and Derwent catchments.

There has been an explosion of procreative activity in our group with a boy born to **Chris** and a girl to **Helga** in the last month. Sleep deprivation studies are going well. **Mick Howland** is in NZ at the moment looking at fish passage issues and techniques. Next year **Kate Hoyle** will be leaving us to go and do her Honours, she will be performing a study on aspects of the octopus fishery with the University of Tasmania's Zoology Department. I have handed in my PhD thesis and had it marked and am looking forward to graduating at La Trobe's Wodonga Campus next March.

Environmental Services is expanding rapidly, when I started there were approximately 20 people and there are now close to 50 working on a variety of both internal and external jobs. We have recently opened an office in Melbourne and as many of those that attended this years congress in Moama heard, I have been working in our Adelaide Office for the past three months. Yes, Hydro's consulting group has had an office in Adelaide for the last six years providing survey and engineering services to South Australia – and now we are hoping to provide environmental services as well. So if anyone is in Adelaide and feels like a cuppa and a chat, drop in, I'd love to see you. I'm off to Tassie for Christmas, but will be back in the new year.

From

Jackie Griggs (Email: jackie.griggs@hydro.com.au)

FRESHWATER ECOLOGY, ARTHUR RYLAH INSTITUTE FOR ENVIRONMENTAL RESEARCH, DEPARTMENT OF NATURAL RESOURCES AND ENVIRONMENT, VICTORIA

It's a very busy time of the year for Freshwater Ecology @ ARI.

Sabine Schreiber has been recovering from ASL conference organising and is currently working with **Richard Loyn** (in Fauna Ecology) on a consultancy for Melbourne Water and getting to play with water data, plankton data and bird data. The adaptive environmental assessment and management (AEAM) literature review is almost complete for a project that explores the use of an adaptive management approach to endangered fish management and the first of **Sabine**'s PhD papers has been accepted - well done!

Freshwater Ecology was prevalent at this year's ASL congress in Moama, NSW with a number of staff presenting papers and posters.

Tom Ryan and **Ruth Lennie** have been investigating temperature impacts on fish egg and larval survival, juvenile growth, preference and fast start performance in the laboratory and results are currently being written up. Population dynamics of freshwater fish populations are currently being modelled, using these thermally influenced biological parameters, to demonstrate the impact of cold hypolimnium water releases from dams.

Charles Todd is making some minor modifications and developing tutorials for the endangered species survival decision tool, 'Essential', which is due for completion by 31 December 2001. The software has already been used to explore management options for trout cod and carp. Congratulations go to **Charles** for the submission of his PhD entitled "Tools for the conservation management of wildlife under uncertainty".

John Koehn has recently been appointed President of the Australian Society for Fish Biology (ASFB) for a 2-year term. One of his many tasks will be the organisation of an international congress on aquatic protected areas to be held in Cairns in August 2002.

The Fish Assessment team have been busy with numerous fish ecology and environmental flows projects. These include an assessment of the effectiveness of the Dight's falls fishway by **Wayne Koster, Brenton Zampatti and Anthony [Rex] Conallin** in assisting the movement of Tupong, various Galaxias, Grayling and other species in the river. **Paul Close** has been investigating the effectiveness of vertical slot fishways in the tributaries of the Murray River for the Goulburn-Broken Catchment Management Authority (CMA). **Brenton and Ivor 'Fozzy Bear' Stuart** have recently commenced a tri-state (SA, NSW and Vic.) Murray River Fishways Project which is a pilot study to develop on-going monitoring program and collect baseline fish data for Murray River barriers. Assessments on some Melbourne Metropolitan fishways (Darebin Creek and Merri Creek) have also recently been completed. Speaking of fishways, an NHT funded project will commence shortly, this is an education study that aims to educate the public on the importance of fishways.

The Fish Assessment Team has recently become a member of a consortium for the Wimmera, Avoca and Glenelg Stressed Rivers Program. Thus far this has involved workshops, field work aimed at recommending flow regimes for environmental water allocation and developing a method for environmental flow studies in Victoria.

The Seven Creeks, Olinda and Stringybark Creek Streamflow Management Plans have been completed and Brenton is part of an expert panel along with SKM, CRCFE and **Tim Doeg** examining sustainable diversion limits for the winter fill irrigation period in Victoria. **Tarmo Raadik, Brenton and Paul** have been spreading their wings into NSW, working with the Sydney Catchment Authority on a pilot study to develop an on-going monitoring program for the SCA.

Pam Clunie, Wayne and Tarmo have commenced an assessment of the current status and distribution of Weatherloach in the MDBC with a view to determine methods of control along with an education and awareness program for the species. **Tarmo** has also been busy with his PhD "Conservation Biology and Systematics of the Mountain Galaxias (*Galaxias olidus*) species complex". He is currently almost through the arduous planning stages for the project and has been trolling the published and grey literature for distributional information on "Gollies" (thanks **Bruce Chessman**), as well as searching Museum collections. Initial collecting of specimens for genetics and morphometrics have been started in Victoria, but recent rains has seen him head north to southern Queensland and northern NSW.

Pam and **Paul** have been meeting with the 'aggies' in DNRE to develop an Agriculture Victoria-funded project on targeted water use efficiency. The project aims to assess the options for saving water on the farm and reallocating the saved water for environmental purposes and to determine an adequate monitoring program for the assessment of increased environmental water allocation. **Phil Papas** and the Macroinvertebrate Assessment Team will be assisting a team of other DNRE staff in another Agriculture-based project that aims to provide farmers with the necessary tools in order to better manage their riparian zones and in doing so improve riparian and instream biodiversity and protect threatened species.

Paul, Rex and Tarmo have commenced an AFFA-funded project which aims to investigate the spread of fish via inter-basin water transfers. They are currently collecting information on the prevalence of such transfers across the Murray-Darling Basin. Stay tuned for calls for assistance with respect to this.

Simon Nicol, Jason Lieschke and Jarod Lyon are currently in the write-up phase for the AFFA-funded re-snagging project which is due for completion late 2001. **Ivor and Matt Jones** are writing up their carp AFFA studies. **Jason** (along with **Phil**) will be continuing their biodiversity assessment of wetlands for Hazelwood Power, following the creation of new wetlands alongside the Morwell River near the Power Station.

The buggos are presently spread over south-eastern Australia, sampling in southern NSW, north-east Victoria, Gipplsland and Melbourne. **Di Crowther** and **Shanaugh McKay** are currently in Eden, watching whales, ooops - sampling, for a State Forests of NSW project looking at the impacts of timber harvesting on water quality in that part of the state. Sampling in Melbourne and surrounds by all members of the team is being undertaken for Melbourne Water as part of their biological monitoring program. **Di** and **George Canale** have been writing up findings from the water quality assessment of the latest Southern Hydro desilting of weirs in north-east Victoria and **Shanaugh** and **Mike Nicol** have recently completed sampling for Hancocks' Plantations, a project that aims to assess the health of streams in Victorian pine plantations. Work is progressing well on the joint DNRE/RMIT University LWRDDC salinity project that members of the bug team are involved in. **Phil**, together with **Steve Saddlier** (no, he hasn't become a buggo) will soon be working closely with CMAs on a NHT-funded project that aims to educate streamside landholders on stream ecology and biodiversity.

Belinda Cant has been busy pulling together and co-ordinating scientists, CMA staff and interest groups as part of the Jim Crow Creek restoration project. The creek is located near Dayelsford in central Victoria. **Steve** and **Phil** are part of the expert panel providing advice pertaining to fish and macroinvertebrate objectives and priorities for the creek.

From

Phil Papas

Winner of the Inaugural ASL Chocolate Frog Award for first report received by the Editor, after initial call for contributions.

SPECIAL DEAL ~
ASL CONFERENCE T-SHIRTS AND CAPS

* * * * Special Deal * * * *

ASL Conference T-shirts Sale

Navy blue t-shirt with a ***small logo on the front left hand side*** (as shown on the front of the congress brochure) and on the back of the shirt - ***Australian Society for Limnology, 40th Annual Congress 2001 Moama, NSW.***

ASL caps are also available for a very small cost, the cap also have the ASL logo on the front.

The T-Shirts are available in sizes, **Medium, Large and Extra Large.** ***The caps:*** **one size fits all.**

Order today to avoid disappointment

☐ **T-shirt**	**$15**
☐ **2 T-shirts**	**$25**
☐ **T-shirt & cap**	**$20**
☐ **ASL Cap**	**$ 7**

Size

- ☐ **M**
- ☐ **L**
- ☐ **XL**

All prices include postage

Payment by cheque or credit card to:
ASL Treasurer - 22 Netherby Ave, Wheelers Hill 3150 or Fax (03) 9545 3549

Please debit my: **Bankcard Visacard Mastercard**

Card number

Amount: $ _____ Expiry Date: ____ /_____

Name of cardholder: _____

Signature: _____

ABN 54 606 483 226
ASL is not registered for GST, so no GST charged

INFORMATION FOR MEMBERS

My name is Brett Roe. I am an international doctoral researcher at Central Queensland University. My research topic is reuse of powerstation wastewater.

One experiment in the study required the construction of an integrated wetlands / polyculture station (Barramundi and Redclaw). It has been successfully operating for over six months. The data collection on this system includes a rough CNP mass balance as well as a host of plant / fish biomass accumulation rates, water quality, hydraulics etc, etc. One goal of this project is to broaden the research base of the experiment, and increase its definition in terms of diversity. Presently, I have collected a summer solstice (pre fish introduction) benthic invertebrate and water column samples. A researcher here took a few photos of the column samples and was very impressed w/ the algae. Benthic samples seem to be dominated by five or six species (mainly Odonata).

Considering I am working alone on the three experiments, it is beyond my capacity to key the samples out, and my skills in algal ID are not up to scratch. I wish to take a few more rounds of samples over the next two years. I am interested in finding a research partner to work on the ID end of the project. Thank you for your time.

Brett Roe
School of Biological and Environmental Sciences, Central Queensland University
Fax: (07) 4930 9255, Phone: (07) 4930-6445, Email: b.roe@cqu.edu.au

~~~~~~~~~~~~~~~~

I am wondering if you would be interested in adding a link on your web site to our Experimental Lakes Area (ELA) web site, which I maintain on a server at the University of Manitoba in Winnipeg, Canada. I currently have a link to your site. The ELA is operated by the Govt. of Canada, Department of Fisheries and Oceans, but much of the on site research is conducted by partners from academic institutions, other government agencies, and the private sector. Our focus is whole-ecosystem, aquatic, experimental ecology and long-term monitoring. If interested, the URL for our site is: http://www.umanitoba.ca/institutes/fisheries

John Shearer, Operations Manager
Experimental Lakes Area, Fisheries and Oceans Canada

~~~~~~~~~~~~~~~~

I am pleased to report that I have finally completed my PhD entitled "Applying conservation assessment to Australian rivers:a case study using macroinvertebrates". The study explored the application of conservation criteria that are widely used in terrestrial conservation assessment to macroinvertebrate data collected in rivers in northern Tasmania. There are particular problems in translating such criteria to riverine systems and other important values of riverine systems are not captured by such terrestrially devised criteria. If we are concerned about promoting conservation of aquatic systems in Australia, there are a number of issues to be addressed relating to assessment and implications for protection. I am planning to proceed towards some wider applications of the research incorporating the findings of a national study completed for LWA in 2000.

Helen Dunn
School of Geography and Environmental Studies, University of Tasmania
Email: helen.dunn@utas.edu.au

Land and Water Australia Consultancy: review of river management legislation

Land and Water Australia commissioned Mary Maher and Associates to undertake a review of both State water resource legislation, and stakeholders' experiences of that legislation, particularly as it affects the management and sustainable use of Australian rivers.

Due to logistical constraints, the review was limited to WA, SA, Vic and Tasmania. Workshops, organised by State natural resource departments, where held in Perth, Adelaide, Melbourne and Hobart in mid-2001.

The draft final report on the project is available on http://www.users.bigpond.com/jon.nevill/

The final report consists of two volumes. Volume One is the main report. Volume Two contains appendices, including analysis reports of state legislation, and model legislative objectives and principles.

The centrepiece of Volume One is a chapter which sets out a proposed model framework for water resource legislation - a framework which could be developed to cover all water aspects of possible comprehensive NRM legislation.

At this stage we would like you to have a look at the draft model framework chapter, with a view to providing us with comment.

If you could provide comment by 10 December 2001 we should be able to examine your ideas and where possible incorporate them into the document. Any comment on the larger content of the two volumes would, of course, also be appreciated.

The model framework is available as a separate download from the above website.

Jon Nevill, www.onlyoneplanet.com.au

~~~~~~~~~~~~~~~

Limnological and Phycological Journals and Books For Sale

Dear ASL members,

I wish to sell a large collection of limnological and phycological journals and books.
The journals are:

1. All Verhandlungen and Mitteilungen issues of SIL from 1964-1991 inclusive. This amounts to about 20,000 pages.
2. AJMFR, 1976-1983 (Vols 27-34), comprising 40 issues.
3. British Phycological Journal (became European Journal of Phycology) 1966-1998, comprising 120 issues.

If any ASL member or their institutional library is interested, would they please contact me via email. I would then draw up a list of the books.

Thanking you,

Peter Tyler
Email: ptyler@deakin.edu.au
~~~~~~~~~~~~~~~

ANNUAL GENERAL MEETING MINUTES

40th Annual General Meeting of the Australian Society for Limnology Held in the Jade Room, Rich River Golf Club Resort Moama NSW

Sunday 30 September 2001, meeting commenced at 4:05pm, with 48 members present.

1. Adoption of Agenda

Proposed by Deb Nias, seconded by Terry Hillman.

2. Apologies

Sam Lake and Richard Marchant.

3. Acceptance of Minutes of Last AGM

Minutes of the 39th AGM held in Darwin on 9 July 2000 were published in the ASL Newsletter Volume 38, #3 – September 2000. Accepted by Abbie Spiers and seconded by Gillian Dunkerley.

4. President's Report

The President, Jane Chambers, thanked the organizers of the 40th ASL Congress (Michael Shirley, Mike Grace, Margaret Hart, Sabine Schreiber and Rhonda Butcher) for an excellent Congress. She outlined that the ASL Executive had been active during the 14 months since the last AGM, and reminded members that the Executive was there to serve its members. The President cited the role of the Awards Coordinator (Andrew Boulton) and his initiative of the student mixer and the better advice and feedback for the student prizes.

During the past 14 months, the main achievements by the Society were:

- Attendance at FASTS SmP day and "Backing Australia's Ability" Forum and met with Land and Water Australia.
- ASL active in sponsorship through SIL (Ian Campbell and Richard Marchant) – lot of recognition to Australia. SIL had donated $35,000 as an unsolicited award to ASL which maybe used for International Travel.
- Reintroduction of Pub Nights in Queensland.
- Wetland Forum (organised by Wetland Care Australia, WWF and ASL).

The new Executive structure (outlined in Volume 38 #4, pp 6 and 7) is working well and enables members to directly contact the person responsible for tasks. The President highlighted the ongoing criticism that scientists did not get their message out there, but said that scientists should be able to focus on excellence in science. A role that the Executive should take up is how to facilitate communication between our science and user groups. She pointed to the AWF and the possibility of finding funding for a knowledge broker as mechanisms for this.

The President outlined the importance of the various Policy Documents that had been prepared by ASL members and the importance of getting these policies into the government and public domains. A Salinity Policy Document should be formulated as a matter of priority.

The President thanked members of the Executive for their efforts during the year.

Report accepted by Deb Nias, seconded by Jenny Davis.

5. Secretary's Report

There was no Secretary's Report due to Richard Marchant's absence. However, the Executive had two teleconferences since the last AGM (22 November 2000 and 6 August 2001), the minutes of which were reported in the ASL Newsletter Volume 38 #4 and Volume 39 #3 respectively.

6. Treasurer/Membership Officer's Report

Treasurer's Report presented by Margaret Hart, outlining the Profit & Loss Statement for year ended 31 December 2000 (attached at end of minutes).

Jacqui Griggs moved that the Treasurer's Report be accepted, seconded by Ben Gawne.

Membership Officer's Report presented by Margaret Hart.

Total membership of the Society at 24 September 2001 was 643. There are now three ways available for new members to joins ASL – email, hard copy (via the newsletter) or via the web. The number of members joining through the website is increasing each year. Since the website inception, 120 new members have joined this way.

The subscriptions for the year 2001/02 were posted out in July 2001. The response to date has been reasonable.

A new computer was purchased earlier this year along with upgraded software. This upgrade will make it easier to follow up on unpaid accounts, record keeping and email.

A new Membership Directory was produced and distributed in March this year.

ASL Membership by State:

State	Ordinary	Student	Life	10 Years	Institutional	Total
ACT	29	13	2	2	1	47
NSW	117	26	5	10	5	163
NT	14	3	5	2	1	25
QLD	59	17	1	3	1	81
SA	28	9	1	0	1	39
TAS	26	3	0	1	0	30
VIC	131	32	3	4	3	173
WA	40	11	0	0	1	52
O/S	15	4	7	1	6	33
TOTAL	**459**	**118**	**24**	**23**	**19**	**643**

Margaret suggested that the 2001-2002 Membership Directory incorporate mobile phone numbers, and delete the fax numbers. Margaret hopes to finalize this Directory before the end of November 2001.
(Editors Note: The 2001-2002 Membership Directory will be incorporated in the next newsletter – March 2002).

7. Treasurer's Honorarium

The President moved that an honorarium of $1,500 be awarded to the Treasurer, Margaret Hart, seconded by Jenny Davis. Voted: carried unanimously.

8. Auditor's Report

Margaret Hart presented the Independent Audit Report to the members of the ASL.

"The financial report has been prepared for the purpose of fulfilling the requirements of the Incorporation Association Act Victoria.

Audit Opinion:
In our opinion, the financial report presents fairly the financial position of the Australian Society for Limnology Inc. as at 31 December 2000 and the results of its operation for the year then ended.

COSTER GALGUT PTY LTD
(Lindsay C Coster FCA Chartered Accountant)"

Accepted by Paul Humphries, seconded by Vincent Pettigrove.

9. Newsletter Editor's Report

Rhonda Sinclair outlined that she had prepared only one newsletter since taking over from Ivor Growns, who she thanked for his encouragement and advice.

Report accepted by Simon Josey, seconded by Abbie Spiers.

The President thanked Ivor Growns for his three years as Newsletter Editor, and outlined that the Executive would forward to Ivor a book voucher as a token of the Society's appreciation.

10. Webmaster's Report

Simon Josey outlined that 11,882 hits of the ASL home page have occurred since July 1999 to 30 September 2001.

Since June 2001, there have been 265 hits to the employment site; 340 hits for the 40th ASL Congress site; and 273 hits for the 40th ASL Program site. The Home Page had 927 hits and 114 hits to the membership application page.

Simon outlined that in general, the site appears to going along pretty well, however, he would like to see improvements and additions to the member's section. If any member has any interesting web links, please forward them to Simon. 90% of the registrations for this Congress were done on-line.

The President thanked Simon for his efforts and noted that the Executive would forward a small token of appreciation to him. Report accepted by Barry Hart, seconded by Tim Doeg.

11. ASL Medal Award Committee Report

The well-deserved recipient of the 2001 ASL Medal was Dr Richard Marchant (Museum of Victoria). As Richard was overseas in September and October, he will present his Medal Address at the 2002 ASL Congress.

12. ASL Life Membership Awards

The President outlined that two members were being awarded Life Membership for their outstanding service to ASL: Dr Richard Marchant and Mrs Margaret Hart. Both have served on the Executive and been the backbone of ASL for many years. Margaret Hart has been the Treasurer/Membership Officer since the early 1980s. Margaret reflected on her time with ASL and thanked the Hart children and Barry for their support over the years.

13. Student Travel Award Committee Report

Margaret Hart presented the report. Seven nominations had been received and cheques totalling $1,650 distributed to assist with the student's travel costs to this Congress.

The recipients were:

Tariq Khan (Centre for Environmental Management, University of Ballarat – $200);
Kellie Watts (CRCFE, Water Studies Centre, Monash University - $200)
Marcus Finn (Ecosystem Management, University of New England - $200);
Clint McCullough (NT - $400);
Hugh Robertson (Ecology & Environment, Deakin University - $200);
Claire McKenny (CCISR, Griffith University - $250); and
Janet Pritchard (Botany & Zoology, Australian National University - $200).

14. Student Prizes

The Student Prizes were announced during the Congress Dinner.

Prize from the NSW Murray Wetlands Working Group (presented by Deb Nias), awarded to a student whose work contributes directly to wetland management or conservation, particularly on private property or by involving the wider community. The Inaugural Winner was **Hugh Robertson** (School of Ecology & Environment, Deakin University) for his presentation on *"The distribution of vegetation communities in Kanyapella Basin: Patterns reflect the hydrological history and the past mismanagement of the wetland".*

Andrew Boulton presented the Student Awards. Andrew outlined that approximately 50% of the papers presented at this Congress were by students.

Best Poster by a Student:

Sonia Colville (Centre for Environmental Management, University of Ballarat) *"Conceptualizing the potential impact of riparian shade on a Phragmites community".*

Best Oral Presentation by an Honours Student:

Ryan Szuch (University of New England) *"Nitrogen dynamics in the subsurface zones of a sandy-bottomed stream, New England Tablelands, NSW";* Commendation to Sarah Cartwright (CRCFE, University of Canberra) *"Where you flood, how often and for how long, affects what you get".*

Best Oral Presentation by a PhD or Masters Student:

Janet Pritchard (School of Botany & Zoology, Australian National University) *"Impact of climate upon fish growth – population synchrony of golden perch (Macquaria ambigua) across the Murray Darling Basin";* Commendations to David Crook (Charles Sturt University, Wagga Wagga; CRCFE; MDFRC) *"Are riverine fish populations sedantary and structured or mobile and mixed?"*; Yeremias Bunganaen (Charles Sturt University, Wagga Wagga) *"Measuring water colour in the presence of suspended sediment using a novel optical fibre technique"* and Alison King (Monash University; CRCFE; MDFRC) *"Are floods critical for the spawning and recruitment of native fish in the Murray-Darling Basin?"*

15. Door Prize

The full report from Tim Doeg is reproduced on pages 45 and 46 of this newsletter.

16. 41st Congress

The President outlined that the 41st Congress would be held in Margaret River (WA) in late September 2002. Mark Lund is the Chair of the Organising Committee. The members present requested that the Organising Committee consider having the Congress during the working week (i.e. not over the weekend).

The 17th Australasian Society for Phycology and Aquatic Botany (ASPAB) Conference and the 4th Australian Workshop 2002 (identification and enumeration of algae) will be held the week before at Curtin University of Technology, Perth. Convenor: Jacob John (RJACOBJO@cc.curtin.edu.au).

17. Future Congresses

Belinda Robson (School of Ecology & Environment, Deakin University at Warrnambool) suggested the 2003 Congress could be held in early December at Warrnambool on the south west cost of Victoria, 3 hours drive from Melbourne.

Max Finlayson informed the members present that the 2003 Congress was locked in for a joint meeting with The New Zealand Limnological Society on the east coast of Australia, to be held late November or early December 2003.

Belinda outlined that Deakin University had the capacity for an extra 300 people (with two theatres seating 200 delegates available).

The President spoke of a proposal for a joint International Society for Wetland Scientists (SWS) and ASL Congress in June/July 2006 in Cairns. Max Finlayson to speak with George Lukacs and Richard Pearson (Australian Centre for Tropical Freshwater Research, James Cook University, Townsville).

18. Election of Retiring Members from the Executive

The President outlined that the members of the Executive were elected for a two year period and the members still had a year to serve. Changes to the Executive during the year were Paul McEvoy has replaced Kerri Muller from South Australia. Abbie Spiers from the Northern Territory tendered her resignation and Frederick Bouckaert had been approached to become the NT representative. Frederick had accepted the position, seconded by Simon Josey.

19. General Business

(i) Andrew Boulton updated members on progress concerning the Young Researcher Award which had been advocated at the last AGM, to fill the gap between the Student Prizes and the ASL Medal. The current Executive had discussed the Award over the past few days and had proposed a name change to the 'ASL Early Career Achievers Award' to be awarded to a person who had evidence of tangible excellence in pure and/or applied limnology, and fulfilled the following guidelines:

a) Up to 10 years experience and a current ASL member,
b) Nomination to be submitted to the President who would pass on the nomination to a sub-committee of the Executive.

Members present suggested that the 10 year time frame should be extended to 15 years experience; should include nominations of people who had changed from marine to freshwater ecology; and acknowledgement of overseas experience (e.g. post docs).

It was decided that the guidelines should be formulated at the discretion of the committee (to be formed) and members to forward input to Andrew Boulton over the next few months. Andrew agreed to prepare a report for a subsequent edition of the ASL newsletter. It was suggested that when the Award is operating, the previous winner of 'The ASL Early Achiever Award' be invited onto the sub-committee.

(ii) Terry Hillman spoke to the members present requesting ASL write letters to the Prime Minister; Leader of the Opposition; Minister for the Environment; and Shadow Minister for the Environment in regard to the 140,000ha of new irrigation development proposed in the Murray-Darling Basin and the selling of sleeper licences under 'The Cap'. Propose a five-year moratorium on the selling of deficiencies or 'sleeping licences' and requesting the Government to buy those licenses until a decision re water allocations has been decided.

Proposal seconded by Barry Hart. Letter to be sent out under President's signature and be prepared by Terry Hillman in conjunction with Submissions Coordinator, Pierre Horwitz.

Max Finlayson reminded members that the letter should be sent after the forthcoming Federal election, due to caretaker government role at present, however, this should not stop the proposed letter being formulated and distributed to members on the web for comment. Deb Nias reminded members of the backlash that ASL had received following its submission on the Snowy River, and it was suggested that Terry and Pierre liaise with Stuart Blanch (ACF), WWF and Wetland Care Australia in the formulation of the letter. Carried unanimously.

(iii) Martin Thoms spoke on 'Science meets Parliament' day (SmP day) and encouraged ASL members to make the time to go to subsequent SmP days, as they were extremely worthwhile. Di Flett encouraged ASL to develop a strategy for ASL members to attend SmP days, endorsed by the President who indicated a small committee should be formed to coordinate ASL's attendance at SmP days.

Meeting closed at 5:30pm.

Minutes taken by Rhonda Sinclair sinclair@mdfrc.canberra.edu.au; ph (02) 6058 2331

AUSTRALIAN SOCIETY FOR LIMNOLOGY INC.

REG. NO. A20309K ABN 54 606 483 226

PROFIT & LOSS STATEMENT FOR YEAR ENDED 31 DECEMBER 2000

	2000	1999
INCOME		
Bank Interest	$2,637	$2,836
Conference Surpluses	14,195	-
Special Publications	-	20
Subscriptions - Full Members	16,067	13,605
- Students	1,440	1,400
- Institutions	1,469	70
-10 Year	700	325
Sundry Income	25	25
TOTAL INCOME	$36,533	$18,281
EXPENSES		
Audit Fees	770	740
ASL Medal	722	1,823
Bank Charges	742	504
Conference		
- Student Travel Award	1,500	4,500
- Student Prize	300	400
- Books, Artwork & Printing	-	878
Depreciation	295	492
Honoraria - Treasurer & IT Advisor	2,000	1,500
Miscellaneous Expenses	320	33
Newsletter	8,132	14,805
Special Publications	520	-
Stationery, Printing, Postage, etc	817	899
Subscriptions - FASTS	2,695	2,505
Telephone	1,545	1,629
Vic Chapter	120	160
Workshop Contributions	2,000	700
TOTAL EXPENSES	$22,478	$31,567
NET SURPLUS/(DEFICIT) FOR YEAR	$14,054	($13,286)
RETAINED SURPLUS AT START OF YEAR	$53,828	$67,114
RETAINED SURPLUS AT END OF YEAR	$67,882	$53,828

AUSTRALIAN SOCIETY FOR LIMNOLOGY INC.

REG. NO. A20309K ABN 54 606 483 226

BALANCE SHEET AS AT 31 DECEMBER 2000

	2000	1999
SOCIETY FUNDS		
Retained Surplus	$67,882	$53,828
Represented by:		
CURRENT ASSETS		
General Bank Account	7,559	4,769
A.N.Z. Trustees Common Fund V2 Plus	-	17,390
N.A.B. Deposit at call	33,333	19,862
N.A.B. Deposit at call	14,807	14,070
Deposit - Conference 2001	500	-
Accrued Income - 2000 Conference	13,935	-
TOTAL CURRENT ASSETS	$70,134	$56,090
NON-CURRENT ASSETS		
Office Equipment - at Cost	5,653	5,653
Less Provision for Depreciation	5,210	4,915
TOTAL NON-CURRENT ASSETS	443	738
TOTAL ASSETS	$70,577	$56,828
NON CURRENT LIABILITIES		
Creditor - FASTS	2,695	-
Advance - Intecol Conference Donation	-	3,000
NET ASSETS	$67,882	$53,828

NOTES TO ACCOUNTS

Whilst the accounts have been prepared on a cash accounting basis accrual adjustments have been made for subscriptions payable to FASTS, conference surplus receivable and a deposit paid for 2001 conference.

DOOR PRIZE REPORT 2001

Once upon a time, in a far off kingdom known as Mt. Gambier, the ASL Door Prize was born. Since then, the prize has become a revered and much sought after award at each ASL Annual Congress. For those of you who are new to ASL, the Door Prize is awarded to the person, event, action, idea or thing that contributes most to the "memorability" of the Congress. In years to come, we will all forget the key talks, the stunning science and the insightful observations (and the dud PowerPoint presentations), but we will all recall the winner of the Door Prize.

But do not be afraid. The Door Prize Collective (who, for obvious reasons must remain anonymous – but ask the President for details on who can make nominations) has only one aim in mind. It is not a way for the selection panel simply to get cheap laughs at the expense of someone else. It has a number of functions. Possibly, its main value is as a symbol of one of the good things about this society. While we can be very serious, statistically correct and make a difference to conservation, the Door Prize represents the other side of the society – the informal, friendly, good natured, humorous, all inclusive nature of the Society. Sometimes, it is hard to imagine some of the more serious scientific societies even contemplating this award.

The Door Prize also seems to be a very good indicator of future careers. Almost invariably, the winner of the Door Prize has gone on to bigger and better careers in Limnology. So, one piece of advice to students that was absent from the mixer held on Thursday night was: "If your PhD isn't going quite the way you intended, don't worry. Get yourself a Door Prize and your career will look after itself." And so to this years nominations:

The LINGUIST nomination goes to Terry Hillman for his opening Plenary address. Within a short space of time, Terry was heard to use French, German, Swedish, Vietnamese and a smattering of a dialect found only in the highland tribes of Irian Jaya. The nominator observed that the only language that appeared to be missing was English.

The MOST INNOVATIVE USE OF FRUIT nomination goes again to Terry Hillman. Terry is well aware that when the audience doesn't seem to grasp the point that he is making, producing a banana from his top pocket always seems to make what he is saying quite clear.

Every year, there is a traditional SAM LAKE nomination. In the absence of Sam this year, the nomination goes to the water hazard along side the 15 fairway on the East Rich River Course. It was this water hazard that Vince Pettigrove and myself decided to conduct a novel artificial substrate algal biofilm colonisation experiment. The methods to this experiment will read: "Small, white spherical artificial substrates were deposited in the deepest part of the water body, using either a 5 or 3 iron at random. In this case, n=4."

The GRAEME KERR IS STILL THE BEST EVER TV CHEF nomination goes to the Rich River Resort for their contribution to vegetarian cuisine.

The "THAT'S A CHEEKY LITTLE CHARDONNAY" nomination is awarded to Barry Hart, seen at some stage during the Barb-B-Que on Friday night, heading back for a second glass of the fruity little salad dressing that he was persuaded to sip earlier in the night by the claim that it was a rather unusual fruit punch.

The PERHAPS YOU SHOULD GET YOUR EYES TESTED nomination goes to Martin Thoms who, while railing against the horrible nature of the lime green cover that was foisted on one of his reports, didn't seem to realise that his wife was sitting in the audience – wearing a lime green top.

The THIS HAS GOT TO STOP nomination goes jointly to Keith Ward and Lisa Thurtell and their respective State Agencies, who, after providing water for the environment, actually went out and monitored the results. Monitoring results of environmental work by State Agencies is a dangerous precedent. Imagine if it caught on!

The NATIVES ARE RESTLESS nomination goes to the dinner boat trip on the Saturday night, which puts a whole new spin on the term "Moonlight Cruise" (you'll have to ask someone who was there).

And there were many, many more nominations that can be mentioned here, mostly involving drinking, shoes, dancing, exposure, singing, soccer, sugar and the like. As these are just a normal part of an ASL Congress, those involved will have to be a little more innovative and do a lot better in the future.

But there can be only one winner, and this year, it was really a lay down misere. There have been a number of Speakers at previous ASL Dinners. Some have been interesting, some have been stimulating and some have raised the takings at the bar to extraordinary heights. But we have never seen a speaker who homed in so well on the ASL conscience. There has never seen a speaker who had researched his audience so well. We have never seen a speaker who has actually stopped the bar take. We have never seen a speaker who managed to convince George Ganf to vote Liberal. And particularly, we have never seen a speaker who has managed to get a laugh out of "Watershed".

So this year, the ASL Door Prize 2001 goes to **John Howard (AKA John Walker)**.

Tim Doeg

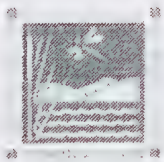
14th TAXONOMIC WORKSHOP

Tuesday 5th & Wednesday 6th February 2002

HEMIPTERA, COLEOPTERA, SYNCARIDA, OSTRACODA, ODONATA, EPHEMEROPTERA and CHIRONOMIDAE

GUEST SPEAKERS:

Peter Cranston, Chris Watts, Patrick DeDeckker Sam Lake, Gunther Theischinger, Peter Serov and Phil Suter



VENUE:

Lake Hume Resort, via Albury

52 acres of parkland on the shores of Lake Hume at Hume Dam, 10 km east of Albury, along the Riverina Highway NSW.

Workshop Program

MONDAY 4th FEBRUARY 2002

1800-2100 **Pre-Workshop drinks**, Restaurant Bar, Lake Hume Resort

TUESDAY 5th FEBRUARY 2002

0830-0900 **Registration,** Conference Centre, Lake Hume Resort

0900-0915 **Official Oening** "Welcome Address", **Gary Jones, CRCFE, Univ Canberra**

0915-1030 **Session 1.** Identification of adults and larvae of the coleopteran families Noteridae, Hygrobiidae, Haliplidae, Gyrinidae and Hydraenidae, **Chris Watts (South Aust. Mus.)**

1100-1230 **Session 2.** Identification of adults and larvae of the coleopteran families Dytiscidae, Hydrophilidae, Hydrochidae and Spercheidae, **Chris Watts (South Aust. Mus.)**

1330-1500 **Session 3.** Identification of the Tasmanian & south-eastern Australian Hemiptera, **Ivor Lansbury & Sam Lake. Presented by Sam Lake (Monash Univ.) & John hawking (MDFRC)**

1530-1700 **Session 4.** Identification of Chironomidae (Diptera), **Peter Cranston (Davis Univ.)**

1700-1730 **Session 5.** Ecology of Caenidae Mayflies, **Phil Suter (La Trobe Univ.)**

1900 **Evening session.** Barbecue ~ Barbecue Pit, Lake Hume Resort.

WEDNESDAY 6th FEBRUARY 2002

0900-1030 **Session 6.** Identification of the families of the Ostracoda (Crustacea), **Patrick De Deckker (Aust. Nat. Univ.)**

1100-1230 **Session 7.** Identification of the genera/species of the Ostracoda (Crustacea), **Patrick De Deckker (Aust. Nat. Univ.)**

1330-1500 **Session 8.** The larvae of the Australian Petaluridae, Archipetaliidae, Austropetaliidae, Telephlebiidae & Aeshnidae (Odonata: Anisoptera), **Gunther Theischinger (EPA, NSW)**

1530-1700 **Session 9.** Identification of the species of the Syncarida (Crustacea), **Peter Serov (DLWC)**

COSTS: Registration fee includes lunches, morning and afternoon teas, handouts and Identification Guides. The guides will also be available for purchase by non-attendants.

CONFERENCE ENQUIRIES: MDFRC Reception: ☎ (02) 6058 2300 MDFRC, PO Box 921, ALBURY NSW 2640, Fax (02) 6043 1626 or John Hawking ☎ (02) 6058 2340, Email: hawkingj@mdfrc.canberra.edu.au

Registration Form / Tax Invoice

The Murray Darling Freshwater Research Centre. ABN 44622831492

Name : _____

Institution: _____

Postal Address: _____

_____

State: _____ **Post Code:** _____

Email: _____

Phone: _____ **Fax:** _____

REGISTRATION COSTS: All costs include GST

Ordinary Participants		Full Time Students	
Both days $255		Both days $200	
Day 1 only $145		Day 1 only $100	
Day 2 only $145		Day 2 only $100	
Evening BBQ $20		Evening BBQ 20	

Vegetarians please tick ☐

TOTAL		TOTAL	

Registration: Please complete this form and forward with payment to the "Taxonomic Workshop Coordinator", c/o MDFRC, PO Box 921, Albury NSW 2640, by **Friday 4th January 2002.**

Please make cheques payable to the **Murray-Darling Freshwater Research Centre.**

Email enquiries: enquiries@mdfrc.canberra.edu.au

Accommodation

Accommodation is available on site at the Lake Hume Resort. Participants should arrange their accommodation through the Lake Hume Resort, who have Motel and Heritage Workers Cottages or through the Lake Hume Tourist Park, who have Units and Caravans. All accommodation arrangements should be made directly through the Resort or Tourist Park. Breakfast is available at both the Resort and Tourist Park.

Lake Hume Resort

Motels: 26 unit motel complex comprise of a double and single bed, full ensuite.

Heritage Workers Cottages: The Cottages are the size of an average family home, with a variety of 2 or 3 bedrooms. Each cottage has a full sized kitchen, complete with oven, basic cooking utensils, kettle, toaster, crockery, cutlery, fridge, air-conditioner, colour television, telephone, separate toilet, shower/bath. Beds have pillows and light doonas, but no linen. You will need to bring bed and bath linen, although linen can be hired from the Resort.

Heritage Workers Cottages 3 ½ Star: (Tariff based on 2 Adults per night including GST). All have 1 Double Bed & 4 Single Beds (some Bunks).

Breakfast: Continental and full breakfast is available at the Lake Hume Resort Restaurant.

Bookings and enquiries:

☎ (02) 6026 4444 Reservations 1800 021 929 Fax 02 6026 4572
Email: lakehume@dragnet.com.au, PO Box 626 (Riverina Highway) Albury NSW 2640.
Delegates are recommend to book early to avoid disappointment.

Lake Hume Tourist Park

Cabins: 4-6 berth cabins are available for hire/share. The cabins contain a toilet and shower. Blankets are supplied, but no linen, so you need to bring linen or a sleeping bag.

Bunkhouse: Backpacker style accommodation is available in the Bunkhouse. Bring a sleeping bag and pillow.

Camping: Powered and unpowered tent sites are available.

Breakfast: Continental to full breakfast is available from the General Store at Lake Hume Tourist Park.

Bookings and Enquiries: General Store (Greg and Joanne Podger)

☎ (02) 6026 4677, Fax. (02) 6026 4081

FASTS

MEDIA RELEASE 5 SEPTEMBER 2001

Evaluation of SmP Day

Dear all participants, plus Presidents of Member Societies

Thank you for your participation in "Science meets Parliament" Day. This is a landmark event at Parliament House.

As the Minister's Chief of Staff said, no other group in Australia has ever commanded the attention of two thirds of all Parliamentarians by organising individual meetings in one day like this.

This year was the hardest to organise, with over 30 MPs ringing us at the last minute on Wednesday morning to change their appointment times. Our apologies to all those who had schedules thrown into chaos: we think Russell Barrow holds the record with five changes!

RECOMMENDED FOLLOWUP BY PARTICIPANTS

1. Send a note to the Parliamentarians you met, thanking them for their time and (if appropriate) following up any of the issues raised in the meeting. Don't send them too much information!

2. Consider inviting your local member out to inspect a working laboratory or experimental site, and to meet some of your colleagues. This should be a "gumboots and labcoat" level meeting, rather than business suits. Introduce the MP to your colleagues - they will appreciate this in the lead-up to the election.

What follows is a summary of the evaluation forms.

Regards

Toss Gascoigne

SUMMARY

Participants rated the event overall at 8.2 on a scale of 1 to 10.

The highlights in the Briefing Day program were clearly the two panel discussions, with about half the respondents to the evaluation process rating them as the best or most valuable part of the Day. The session featuring the three Parliamentarians was marginally ahead of the session with the Chiefs of Staff. A significant number of participants also rated the cocktail reception as a highlight.

This reflected a general preference for more conversational and interactive discussions.

The words most commonly used to describe the meetings with Parliamentarians were "positive" and "supportive". The scientists rated the meetings with Parliamentarians 7.3 on a scale of 1 to 10. Most of these ratings were 7 or above, and reflected sympathetic and knowledgeable MPs and suggestions for follow-up meetings and exchanges of material.

A minority of all meetings (about 20 per cent) scored 6 or less, and should be put in the "marginal-to-unsatisfactory" category. On these occasions the scientists felt the MPs listened but were not genuinely interested; or tried to press their own agenda on the conversation.

Quite a few respondents recorded that MPs were unaware of the higher HECS issue.

SUGGESTIONS FOR NEXT YEAR

Participants requested more notice and earlier information, so they had more time to prepare for the event. They would have liked more opportunity to participate in the discussions, including the meetings on biotechnology and nanotechnology. Clearly SMP is being seen as a great place to network.

The content of Briefing Day was valued, but some people who have attended all three SmP Days had heard some of the ideas before.

The cocktail reception generally drew a positive response. For some it was a highlight, and a valuable opportunity to meet MPs and colleagues. But it was difficult to identify the MPs and that there did not seem to be many present [we estimate about 40, more than previous years.] Several people suggested that MPs be announced or wear a namebadge.

We are already planning how to implement changes to incorporate your suggestions.

YOUR COMMENTS ON THE EVENT AS A WHOLE

Very well organised. The impact is becoming obvious.
Nominating the interview topics an excellent idea. Overall very good – but pack less into Briefing Day.
The event was better than I expected. Would like to spend more time in Parliament House.
Must do it now at the State level.
Keep it up. Allow more networking on day 1.

The pollies are taking this seriously. I have no doubt that past SmPs have helped put science on the political agenda.
A valuable experience as a young scientist.
This year will enable many of us to handle this even better next time.
Both MPs were cordial. The level of interest in science was high and unexpected to me.
An extremely useful two-way dialogue.

Organisation this year was excellent - well done, guys!
Better format for Briefing Day compared with previous two years. Better feedback from MPs than previously. Great way to meet other scientists.
Information packs were great, but too late. No time for preparation/planning with partners.
On balance a very valuable exercise.
I am absolutely positive about the event and will return.

Briefings were a little too extensive. The event was exciting, enriching and well-managed, [but] I was a little concerned that the image/views of scientists were presented in such a way as to ignore the diversity of views among scientists.
A fantastic experience. I'm glad I came and congratulations to FASTS for making it possible!
An excellent program, and well worth continuing.
Logistical nightmare which was handled extremely well by FASTS. Well done!
I found the Briefing Day very useful.

Nomination of interview topics was an excellent idea.
Consider satchels to carry information. Folders were awkward. Get more young scientists.
Overall very good. Only suggestion is to pack less into Briefing Day.
Very well organised. The impact of SmP is becoming obvious.
It was well-organised and successful, and I look forward to next year.

I would have found it useful to have had more notice of who I was to meet.
The meetings were very positive, but needed more time.
FASTS tends to be a little too focussed on physical sciences and technology, not enough consideration of biology.
Make info on issues and how to approach meetings available on web well before the meetings.
Very well run, excellent idea, and let's see more of it. Congratulations on pulling off a very difficult exercise!

Use Minister's and MP's staffers more on Briefing Day.
Parliamentarian requested reports of my specific research, for a speech.
Suggest that registration form should include a list of MPs you don't want to meet.
MPs should be introduced round at the Cocktail Reception.
I would have liked to see more industry people there.
Great, let's do it again. I would like more interaction with MPs - a boat trip?
Develop a database of MPs' interests so they might be kept informed of significant developments.

The scientists rated the meetings with Parliamentarians 7.3 on a scale of 1 to 10.

Distribution of scores

Score	Number of respondents
10	7
9	16
8	30
7	20
6	7
5	4
4	4
3	3
2	4
1	0

From these scores it is apparent that scientists found a high degree of satisfaction and value from most meetings. Nearly 80 per cent of all meetings scored 7 our of 10 or better. Each line is a comment by one scientist on a meeting.

COMMENTS ON THE MEETINGS
An excellent introduction to the person and a good first meeting.
MP certainly tried to direct it - said we needed to be more aggressive with media, need a publicly recognised media advocate.
Very positive, friendly.
Very positive, interested in what we had to say. Interested in nanotechnology.
Listened but no great enthusiasm expressed.

The Senator appears to have little serious interest in science. Only introductory pleasantries before Senator called to speak in Senate.
Unfortunately cut short (30 minutes) at a time when common interests were being found, in particular solutions to education problems.
The discussion was very positive and went for 90 minutes. We established a good rapport.
Of little use to science. We kept on trying to introduce the 4 ideas, but he kept on commandeering the conversation! Warm, pleasant meeting, but no use for us!
Pleasant but not too valuable.

Very supportive - very useful and pleasant. Photos were taken by the adviser for the local newspaper.
Good general PR for science.
The Senator is quite well-informed and interested. Wanted details of HECS and university funding.
Friendly, productive. Said uni system needs deregulation rather than more money!
Not very productive. The Senator has a different agenda e.g. the need for increased investment in business.

Positive. She was interested and impressed and responsive to our suggestions. Wanted to know problems of young scientists.
On side. Strong support for investment in basic research and subsequent commercialisation. More has to be done to make teaching a more attractive option. A decent and humble man.
Positive attitudes, although it was difficult to turn the conversation to the major issues.
He talked. He was generally very much on side. Suggested FASTS should discuss interns proposal with Speaker, President of Senate.
Strongly supported science and university but there were obvious budget constraints.

Very positive, strong support for science research.
Productive, interested in impact of technology on small business.
Supportive of uni and research priority. Are standards falling in universities? What are current academic salaries?
Supported changes to Mining Acts to give more certainty to Native Title impact on mineral development.
Open and plain-speaking. The MP is a passionate man but science does no appear to drive him. He said it was futile to talk to people like him because he has limited input. Suggested we talk to Ministers and Finance.

An ex-teacher sensitive to plight of teachers. Also interested in fuel ethanol.
Enjoyable, informative, connected. Relevance of scientific issues to electorate.
Positive discussions on greenhouse, sustainability, management of wetlands.
Expressed some scepticism on greenhouse.
A Minister who did not realise differential HECS affected teachers. Said GM foods, stem cell research, nuclear power etc would get no Government support as long as the electorates are against them.
Very positive, especially about gene technology. Negative about CSIRO because it is too close to commercial interests.

Listened carefully, gave us lots of time.
Meeting was ok but didn't seem to lead anywhere.
Very sympathetic to science, agreed with neglect of universities.

Wanted the big picture, what the science vision is. Positive. MP appeared willing to get involved in education issues. Not aware of differential HECS. Positive in general sense. How strategically necessary is a research reactor?

Senator of view that we had to convince the community of the benefits of science. We suggested we should work together.
This person is an excellent advocate for science/technology/education/health issues, and is very knowledgeable about these issues.
Very good - strong knowledge of issues surrounding radioactivity and effects on local areas.
Difficult not to say it was a waste of his time and ours. The Senator constantly drove the conversation and discussion to "his issues".
He did not seem interested in science per se. Disliked extreme green groups, in favour of sustainable use and conservation of forests.

Went well, very friendly and positive. Keen to support WISENETY. Forestry important in her electorate.
Very good - will be an ally in general. May have some disagreements.
Very positive and receptive. Intelligent member with good understanding of issues. Very supportive of need to boost science and maths.
The Libs had done a great job. The MP is retiring and had no agenda to be re-elected. Unproductive but friendly.
ALP should be able to commit to funding removal of science HECS excess fee.

Brief and business-like. Favourable. MP noted that the process had certainly managed tom raise the profile of science in parliamentary forum.
Senator seemed supportive of science in general, expressed support for basic science but claimed to have no expertise.
He was not really interested. Asked why don't universities support science better, if it is so important?
We were preaching to the converted, but he was interested in some of the solutions presented e.g. internships.
Open and friendly. Interested in brain drain, ethics.

Interested in improving the university enrolments in his electorate. Open and friendly.
Very useful. A highly articulate intelligent man who should be able to make a big contribution in Government.
Enthusiastic about education, encouraging people into science. A short meeting, but I think he was genuinely interested.
Against industry involvement in university research. I felt he was mostly looking for negatives, less interested in positive ideas.
Generally supportive, but ignorant of impending shortage of skilled scientists and engineers. Wanted real information on salinity.

MP projects the view that science will be a winner if Labor wins next election. Accepted our offer to speak at schools in the electorate with enthusiasm.
Extremely literate and enthusiastic about science. Keen to find ways to make industry do more.
We floated idea of fellowship scheme, which he liked.
Very positive. Asked about future of Antarctic CRC.
Very positive. Interested in water and soils, appreciated being given a CD on this topic.
Genuine concern about the lacklustre appeal of science.

Expressed doubts about availability of more good students to go into teaching positions. We were able to advise on differential HECS.
He was really interested in what we had to say, and enthusiastic about the need for innovation. Has visited Ireland, and is completely convinced of need to be more innovative.
Animated. Said the opposition are a bunch of idiots.
Said no more tax expenditure possible - need to give tax back.
Worthwhile, lively. Concerned about health, environment; appreciated HECS issue.

SET focus not high on her agenda, but she was positive about it.
Interested in idea of experiential programs to stimulate interest in students.
Extremely worthwhile. Positive towards science, unaware of impact of high HECS on numbers of science teachers.
Extremely positive and useful two-way dialogue. Salinity, greenhouse and science teachers.
Very positive, seeking to promote science within the government. Feel we need solutions that don't need further government support. Tax incentives often go to the wrong people.
Useful. Agreeable to FASTS' suggestions. Surprised at the state of science education in Australia.

Useful. Very open to ideas, experiences despite non-scientific background.
Interested in science (especially water) as it affects her electorate.
He was interested in helping the MINet and Questacon projects if we made further contact.
Good. Very positive. But as a science graduate he needs a more detailed message.
Overall positive views, generally (and genuinely) supportive of young people in science and science as a whole.

Excellent rapport. Recognises need to cut HECS; funding squeeze on science/engineering faculties.
He lectured us. Acknowledged importance of science. Interest in local issues, also environmental issues.
No concept of implications of not having a strong science base, and no ideas of what Government should do about it (or why they should do anything about it).
Very concerned by salinity. Wanted to know if magnets were likely to reduce salinity. Motivated by sustainable development.
A very capable and astute politician, very keen to make a difference. Very committed to increasing the number of scientists, improving quality of education.

He was knowledgeable but it was difficult to get past his attitude - he was a bit cynical.
Interested in science, interested in our meeting. It was tough having three people there.
It was nice to meet an MP but he will have forgotten us the next day.
Defensive attitude - worries most about high unemployment in his electorate.
Good discussion. Science not his area, but interested in what we had to say.
Mostly the party line. Became defensive.

Very positive. The Senator appears to be genuinely interested in S&T, particularly applications in mining industry.
Relaxed, open and productive.
Rushed and edgy. Seemed eager to get back to speech.

Toss Gascoigne, Executive Director, FASTS. Email: fasts@anu.edu.au

MEDIA RELEASE 27 SEPTEMBER 2001

Report on Universities Welcomed

FASTS welcomed the report "Universities in Crisis" by the Senate Employment, Workplace Relations, Small Business and Education References Committee.

The report paints a grim picture of the university sector, a position that has been reached after a decade of inaction and under-investment by successive governments.

Professor Peter Cullen, President of the Federation of Australian Scientific and Technological Societies (FASTS), said that Australia needed a constructive debate on the role and future of our 39 universities.

"It will involve clear thinking and hard decisions," he said. "We need to balance the sometimes conflicting factors of our size, our small population and our role in the region.

"What resources we should bring to bear on this sector as an advanced nation with a mid-sized economy?"

"This is a debate we have to have - the sector cannot be left to wallow indecisively any longer.

"Research and higher education may have been swept from the front pages by the dramatic events both in Australia and overseas of the past month, but these issues are long-term and we ignore them at our peril."

Professor Cullen said it would take time to digest the 471 pages and 39 recommendations of the Report, but at first glance, the report highlighted many of the issues of concern to the sector.

"One thing is clear: Australia needs to increase its national investment in research and higher education.

"We can argue what the level of that investment should be, and the appropriate balance between government, private and industry sources."

Professor Cullen said the science community welcomed a number of the recommendations, including proposals to double the number of research fellowships, to increase in the level of Block Grants, and to make the office of Chief Scientist a full-time position.

"Now we would like to see a wider canvassing of views, to maximise support from all sections of the community." he said.

Toss Gascoigne, Executive Director, FASTS. Email: fasts@anu.edu.au

MEDIA RELEASE 15 OCTOBER 2001

Demand for Maths and Science Teachers Hotting Up

Aggressive recruiting by principals of rural schools and teaching agencies from the UK are bringing the market for science and mathematics teachers to the boil. Shortages in these key subjects are hitting hard at country schools and schools in disadvantaged areas, such as the western suburbs of Sydney and Melbourne. The problem is hurting schools across the board.

Ms Jan Thomas, Vice-President of the Federation of Australian Scientific and Technological Societies (FASTS), said today (Monday) that shortages were forcing schools to use an increasing number of under-qualified teachers in these key subject areas.

"School principals from remote areas have been making special trips to teacher training institutions to recruit next year's staff," she said. "We haven't seen that before. Things are only going to get worse - we're bracing ourselves for the time when the Americans enter the recruiting market in pursuit of science and mathematics teachers. American salaries and conditions look pretty attractive to Australians."

Ms Thomas said that forty per cent of teachers taking mathematics in junior high school classes are underqualified. She said some schools have reached the stage where they are dropping the more challenging levels of mathematics and science.

"There are two sides to the problem: the lack of any organised program to update the knowledge of existing teachers (especially those teaching out of field); and a shortage of young people entering science and mathematics teaching," she said.

The solution calls for action by both Federal and State governments. The Federal Government needs to provide extra places at universities for teacher training and retraining.

"We also need additional funding to allow student teachers to undertake practice teaching in country schools," she said. "New teachers are not going to choose country schools if they don't know what they're like, and we can't afford to send them there for practice sessions."

The State governments need to provide study leave for existing mathematics and science teachers. Half a day a week over a year would allow teachers to improve their discipline knowledge and absorb the latest information about their subjects.

"Unless Australia tackles the issue in a determined way, this country will go backwards," Ms Thomas said. "A modern economy demands a properly educated population.

"Recent statements by the Business Council of Australia and Rupert Murdoch underline the widespread concern of the community about our national investment in education."

Ms Thomas said the Federal Government had talked a lot about the need for literacy and numeracy, but the education system were still waiting for follow-up action and funding.

"As far as the ALP is concerned, the recent announcements for HECS-free scholarships and re-training are a promising start; but the problem is requires action on a grander scale," she said.

Toss Gascoigne, Executive Director, FASTS. Email: fasts@anu.edu.au

MEDIA RELEASE 21 OCTOBER 2001

Minchin vs. Evans Science Policy Debate Is On!

Senator Nick Minchin, Minister for Industry, Science and Resources, will debate science policy with Martyn Evans MP, ALP spokesperson for Science and Resources.

The debate will be in Adelaide, at 11 am on Monday 29 October. It is to be held at the Radisson Playford Hotel.

The debate is to be hosted by the Federation of Australian Scientific and Technological Societies (FASTS), and co-sponsored by national organisations interested in science policy.

Professor Peter Cullen, President of FASTS, said the Australian public wanted to know what plans the parties had for science.

"Both major parties are proposing new policies and significant investment to address science and research issues," he said. "The Government began the process with its $2.9 billion announcement Backing Australia's Ability last January.

"The ALP brought out a discussion paper in Knowledge Nation, and has promised to trump the Government's plans."

He said the science community is pleased with the growing interest political parties have shown in science and technology policy.

"Investment in science can show huge national benefits," he said. "It's a long-term investment which pays off in jobs and a better environment, and critical to the success of a modern economy.

"We would like to hear more about the plans of the major parties."

Professor Cullen said the Minister and Shadow Minister would face questioning from a panel of journalists.

The meeting is open to the public.

Media are invited to attend the debate. It begins at 11 am at Adelaide's Radisson Playford Hotel, 120 North Terrace.

Following short initial statements and responses, the Minister and Shadow Minister will be asked questions by a panel of journalists.

Register your interest by sending an email to: John.Rice@flinders.edu.au, with the subject line "science policy debate"

Toss Gascoigne, Executive Director, FASTS. Email: fasts@anu.edu.au

MEDIA RELEASE 31 OCTOBER 2001

ALP Policy Announcement - Knowledge Nation Policy "Another Step Down The Road"

The 'Knowledge Nation' proposals announced in the ALP Policy Launch today (Wednesday) were warmly welcomed by the science and technology community.

Professor Peter Cullen, President of the Federation of Australian Scientific and Technological Societies (FASTS), said the size of the ALP package would have a significant impact on Australia's progress towards a modern economy.

"Additional support for the universities is long overdue, as is the boost to CSIRO," he said. "Scientists working in these areas have been doing it tough for some years now."

He listed as constructive the proposals to create a new Institute of Mathematical Sciences, further incentives for industry to invest in R&D, and extending people's access to a national high-bandwidth network.

"These proposals reward and encourage Australians to take positive actions to build a modern economy," he said. "They are the things that will make a difference to the way ordinary Australians conduct their lives in the next ten, twenty years.

"Our national investment in people and ideas will pay big dividends - higher pay, more jobs, better jobs, a cleaner environment."

Professor Cullen said the ALP costed their new policies at $5.8 billion over 5 years. This is a significant expansion of the Government's $2.9 billion package 'Backing Australia's Ability' announced last January.

"We welcomed 'Backing Australia's Ability' as a positive first step, and we see the ALP's 'Knowledge Nation' proposals as an equally welcome second step towards a modern economy," he said. "It is heartening to see both major parties actively pursuing this agenda."

He said Australia had allowed itself to slip behind the best international standards in science, research and higher education in recent years. It would take an extra $13 billion over the next five years to reach the OECD average spend on R&D by government and industry.

Professor Cullen said that investing national funds in science and education is the best investment Australia can make in terms of creating new jobs and new opportunities.

"But we need to carry the community with us. An investment of this size requires a national consensus that we need to change our course as a nation. Australia is learning, slowly and perhaps painfully, that we can't rely on luck and our natural advantages if we want to be a modern economy. It requires a deliberate course of action."

Peter Cullen, President, FASTS
Toss Gascoigne, Executive Director, FASTS. Email: fasts@anu.edu.au

MEDIA RELEASE 31 OCTOBER 2001 (FROM THE CRC ASSOCIATION)

Minchin vs. Evans Debate

FASTS convened a Science Policy Debate between Senator Minchin, Minister for Industry Science & Resources and his Shadow Minister counter part Mr Martyn Evans on Monday 29th October in Adelaide. There were 80 there with TV and radio.

Feedback after the event from FASTS noted that the debate was a very civilised affair. Although the discussions were animated, they lacked edge.

The Minister stood on the Government's record, sighed deeply when people said it wasn't enough, said every program in every portfolio area always wanted more.

Martyn Evans explained the Knowledge nation was a new way of looking at things, a long-term program encompassing everything. This will be on the ALP web site (www.alp.org.au) after the ALP Policy Launch on Wednesday 31st October

The full transcript of the Science Policy Debate is on FASTS web site: www.fasts.org

Ninety five questions were submitted for consideration (also on FASTS web site): the CRCA's question was #39:

"Since the CRC Program is the acknowledged jewel in the crown of the Australia's research and innovation system, what do both sides intend to do to ensure that the Program is specifically developed and strengthened in the next Government should they be elected?"

Anne Campbell, Executive Manager, CRC Association

MEDIA RELEASE 23 NOVEMBER 2001

FASTS Welcomes New Science Ministerial Team

Scientists and technologists welcome the appointment of Brendan Nelson and Peter McGauran as Ministers responsible for Science.

Professor Chris Fell, President of the Federation of Australian Scientific and Technological Societies (FASTS), said their record of achievement was a good portent for the science sector.

"Science is all about jobs and a future for Australians," he said. "We need Ministers with vision, people who see the possibilities of the portfolio and represent them strongly to their colleagues."

"Brendan Nelson and Peter McGauran have all the hallmarks of being champions for science."

Professor Fell said he was pleased the portfolio would continue to be represented in Cabinet. "History has shown that the national interest is best served when Science is represented by a Cabinet Minister," he said. "We'd like a constant presence at the big table, where the major decisions are made. There is a strong component of science in most portfolios."

He gave a cautious endorsement of the new departmental arrangements, which place science with education and training.

"The big issue is the level of the national investment in science and research," he said. "Australia needs to lift its investment by Commonwealth and State governments and by industry".

"If the new arrangements will help, I am all in favour of them."

He said that there was much unfinished science business to complete, and he hoped the Government would continue its strong commitment in this area.

"In launching 'Backing Australia's Ability', the Prime Minister said he was determined 'to back innovative Australians, build on known strengths, explore new opportunities, and compete successfully with the best the world has to offer'," Professor Fell said.

"That is a great statement of principle. We'd like the Government to remember these words when they come to setting the new triennium budget for CSIRO this year.

"Government could also consider bringing forward some of the new money announced in 'Backing Australia's Ability'.

Professor Fell paid tribute to Senator Nick Minchin for his achievements as Minister for Industry, Science and Resources.

"Nick Minchin's period as Minister will be remembered for the major funding announcement 'Backing Australia's Ability', and for a strengthening of the Prime Minister's Science Council," he said.

Toss Gascoigne Executive Director, FASTS. Email: fasts@anu.edu.au

ARC Expert Advisory Committees

FASTS has been invited to nominate appropriately qualified people for positions on the Australian Research Council (ARC) Expert Advisory Committees for 2002.

As well as playing a role in the assessment of research grant applications, the Expert Advisory Committees play a strategic role in advising the ARC on emerging areas of research. This year the ARC is particularly seeking nominees with expertise in the following areas:

Biological Sciences and Biotechnology
Engineering and Environmental Sciences
Humanities and Creative Arts
Mathematics, Information and Communication Sciences
Physical and Earth Sciences
Social, Behavioural and Economic Sciences

The closing date for nominations is Monday 26 November 2001.

For further information contact Ms Genevieve Kelly on (02) 6284 6627 or email genevieve.kelly@arc.gov.au.

Toss Gascoigne, Executive Director, FASTS. Email: fasts@anu.edu.au

FASTS CIRCULAR NOVEMBER-DECEMBER 2001

IN SUMMARY:

1. President's Report
2. New Ministers and Shadow Ministers
3. FASTS' Council
4. Universities - The Great Unresolved Issue
5. CSIRO First Test for Government
6. New Executive
7. New Board
8. "Science meets Parliament" Day 2002
9. Occasional Papers
10. FASTS is Growing

Dear Presidents of Member Societies

1. PRESIDENT'S REPORT

On November 19, I (Professor Chris Fell) formally took over as President of FASTS for the next two years. This follows an immensely successful two years in which the Presidency was shared by Sue Serjeantson and Peter Cullen.

Our first task is to establish an agenda with a new Government and a new Minister.

Twelve months ago the tide was running our way. The Government was moving to respond to reports from the Chief Scientist and the Innovation Summit, and the Opposition was talking up its intention to re-energise science, research and higher education.

It seemed as though election 2001 was going to be a case of "Backing Australia's Ability" versus "Knowledge Nation", with the question of Australia's national investment in these areas the major topic of discussion.

We were to be disappointed. These issues were barely discussed in an election dominated by a series of international and domestic crises.

The present situation offers interesting challenges. The new Government's agenda does not appear to be crowded, and I believe they will be receptive to new ideas.

The Opposition has consciously tried to renew itself. The Leader, Deputy-Leader and half the members of the Opposition front bench are all new to their positions, and they will be looking closely at why "Knowledge Nation" failed to fire the Australian imagination.

The State Governments also offer interesting possibilities, with an increasing recognition of the capacity of science and research to generate new jobs and new industries at a regional level.

Australian scientists and technologists have two priceless contributions to make to politicians in Australia - ideas and solutions. Both these qualities are in short supply, and add to the importance of our regular contacts with Parliamentarians at national and regional level.

2. NEW MINISTERS AND SHADOW MINISTERS

Brendan Nelson and Peter McGauran are the Ministers with responsibility for Science in the new Government. Brendan Nelson is Minister for Education, Science and Training and is a member of Cabinet; and Peter McGauran is Minister for Science.

This is a strong team, with Brendan Nelson bringing a much-needed new perspective to Education and Higher Education. Peter McGauran was an energetic and accessible Minister for Science in the first Howard Government, and his return will be welcomed.

The Opposition is represented by Deputy Leader Jenny Macklin, who opted for Shadow Minister for Employment, Education, Training and Science over the Shadow Treasury position. She will be supported by Senator Kim Carr, as Shadow Minister for Science and Research.

I have been in touch will all these people, and also Senator Natasha Stott-Despoja as leader of the Democrats and spokesperson for Science.

3. COUNCIL

Council this year was an opportunity to have a wide-ranging discussion on strategy and issues to take up at Parliamentary and bureaucratic levels.
Our agenda and our approach has to be re-focussed in the light of the election, and the contributions from our Member Societies were particularly welcome.

Members will be invited to support three major activities this year: a forum at the National Press Club in mid-year; "Science meets Parliament" Day at the end of the year; and to comment and contribute ideas to the new edition of the FASTS' policy document.

4. UNIVERSITIES - ONE GREAT UNRESOLVED ISSUE

The university sector remains one of the great unresolved issues in Australian public life.

A decline which began 15 years ago is continuing. The pressure on academics to perform more tasks is increasing, as their salary levels are steadily sliding down the ladder on international competitiveness. The quality of infrastructure declines as funding pressures increase.

Neither major party seems willing to tackle the issue.

It is time for a national review of the university sector, with genuine discussion on what Australians want from their universities, and how much they are prepared to pay to achieve it.

5. CSIRO FIRST TEST FOR GOVERNMENT

CSIRO's triennium funding is due for renewal this year.

Both the CEO and the CSIRO Staff Association have put the case for an additional $100 million per year. This will rebuild CSIRO's core capacities after a decade of Government thinly slicing away at its budget.

It will also enable renewed efforts by CSIRO effort to commercialise its results.

6. NEW EXECUTIVE

The Board meeting on November 19 elected a new Executive. Successful candidates were:

President	Professor Chris Fell
Vice-Presidents	Dr David Denham AM
	Professor Rob Norris
Secretary	Dr Peter French
Treasurer	Associate Professor John Rice
Chair, Policy Committee	Dr Ken Baldwin

The Executive has co-opted Jan Thomas to join the Executive for the next twelve months, in the role of past Vice-President. Peter Cullen is unavailable to serve as past-President.

7. NEW BOARD

Aquatic Sciences	Dr Alan Butler (CSIRO)
Biological Sciences	Assoc. Professor Melissa Little (UQ)
Chemistry	Professor Chris Easton (ANU)
Earth Sciences	Mr Mike Smith (Geo Instruments Pty Ltd, NSW)
Food & Agricultural Sciences	Mr Ian Longson (Dept of Agriculture, WA)
Mathematical Sciences	Ms Judy Mousley (Deakin University)
Medical Sciences	Professor David Tracey (UNSW)
Physical Sciences	A/Professor John O'Connor (University of Newcastle)
Plants & Ecological Sciences	Professor Snow Barlow (University of Melbourne)
Technology Sciences	Mr Len Ferrari (Consultant, NSW)

Ian Longson has joined the Board as member representing the new Food and Agriculture sector.

8. "SCIENCE meets PARLIAMENT" DAY (SmP) 2002

"Science meets Parliament" Day is a landmark event in Australian political circles.

Scientists are still the only group to organise a mass visit to Parliament, and a wonderful opportunity to put our case for increasing the national investment in science and research.

Over time this event will build up relationships and confidence between our sector and Parliamentarians. Increasingly MPs will see us as a group which has both ideas and solutions, two priceless asserts to them.

I will be seeking the advice of the new Science Minister about the best dates for SmP 2002. We expect to run the event October or November 2002.

This would be an excellent time to run your Society's Council meeting, and then go on to make a strong contribution from your discipline to Parliamentarians.

9. OCCASIONAL PAPERS

The Parasitology Society is about to launch an Occasional Paper "Parasitology in Australia: an Investment in Human and Animal Health".

The paper warns that Australia's capacity to respond to parasitic diseases affecting humans and animals is being eroded by lack of national investment.

It points out the level of danger to Australia - 267 soldiers from the INTERFET force in East Timor returned with malaria, even though they were issued with the standard anti-malarial drug doxycyclin.

Other Members Societies might consider a similar publication. Guidelines are available from our office, and FASTS offers considerable support with printing and publicity.

A copy of the paper will be sent to all Members upon publication, and it will be available electronically at the FASTS web site: www.fasts.org

10. FASTS IS GROWING

We now have 57 Member Societies.

The most recent are:

- Australian Institute of Agricultural Science and Technology
- Institute of Australian Geographers
- The Society for Reproductive Biology

If you know of any non-Member Societies, please encourage them to join. Refer them to our office for information on the benefits and costs of membership.

A full list of Members is on our web site.

Toss Gascoigne, Executive Director, FASTS. Email: fasts@anu.edu.au

A POSTCARD FROM THE FREE MARKET

THE "NESTED DEADLINE DILEMMA", OR "HOW TO DO RENOVATIONS, AND WORK AT THE SAME TIME"

It's late at night. The adrenalin is pumping. The extra strong espresso coffee is sitting there going cold as your fingers fly over the keyboard (ever noticed that the number of little red squiggly lines that Word puts under the spelling mistakes is directly proportional to the speed at which you try to type). Another 2 pages and it will be finished. Flip between the Excel file that generates the graphs and the Word file. Edit, Paste Special ... crikey, do I need an Excel Object, Bitmap or Picture .... um .... Picture, Float over Text .... OK. Of course, at this stage the screen goes blank and some weird hieroglyph is inserted into the text where the graph should be. Undo, repaste, type, type, type.

Ah, the joys of a deadline.

Everyone knows the strain of trying to meet a strict deadline. From the undergraduate student with a major essay due on Friday, to the PhD student with the deadline of February next year, to the consultant with the deadline of yesterday. It's sheer panic, hard work and long hours. Probably the worst thing in the world.

Not quite! Imagine a project without a deadline. I am currently involved in about three such projects (Clause B in the contract of each of them means I can't divulge any details) where the formal deadline has lapsed, with no end in sight.

There are many reasons for a lapsed deadline. Usually, it's one of four reasons.

1. "We will get you the data to be analysed by Friday. You will analyse it as Stage 1 of the project, and report by such-and-such a date."

Yeah, sure! Which Friday was that again?

2. "A draft report on Stage 2 will be produced by such-and-such a date, and a brief final report will be produced by such-and-such a date, following the provision of comments which will be forwarded by such-and-such a date"

Following the eventual arrival of the data, the analysis is conducted and a draft is promptly produced and submitted. It's unpolished and not quite complete (the deadline frenzy doesn't seem to apply to drafts as much). And the waiting begins. The deadline for comments arrives and passes – "just waiting for some final comments from so-and-so who is on holidays/at a conference/off sick" – and time drags on. And on. The final deadline arrives and passes, and the comments have not arrived. By agreement, the final report is suddenly not due until some unspecified time in the future. Of course, they will let you know when ... and the waiting begins.

3. "Results from Stage 2 will be incorporated into Stage 3, to be conducted by someone else who has a deadline of such-and-such. A report from Stage 2 will be produced as part of the overall project."

Of course, the Stage 2 results are vital to the overall project, so the project is late because the draft report on Stage 2 has never been accepted. However, Stage 3 starts and you think about producing your section on Stage 2 of the final, final report (not the brief report on Stage 2 noted above – which is late, and actually never gets done - but the chapter in the overall report). But you wait for the final project deadline for the chapter to be completed. Of course, the actual chapter is not important as it is the analysis that is incorporated into Stage 3. This can be done without the chapter itself. So the project continues, but the chapter just sits there, waiting for ....

4. "Following the conduct of the further technical investigations identified in Stage 3 of the project, Stage 4 will be completed by such-and-such a date".

Unfortunately, the technical investigations that arise out of Stage 3 are usually quite considerable (the F10 button on my computer automatically creates the "More work is required" paragraph). Usually, they involve some sort of additional sampling, survey, data collection or the like. And that has to be done by some other preferred consultant. So there's contract negotiations, finding the money for the unforeseen further investigations, and getting the right signatures (why is it that the simplest part – getting the right person to sign a bit of paper – always seems to take the longest?) And the further investigations need to be done with additional deadlines. The worst is when bug sampling is needed. Quite rightly, the samples need to be taken in Spring and Summer, as specified in the standard methods for most of these. But it's usually identified that further sampling is required in about June! And so the deadline passes, and the waiting begins.

The "Nested Deadline Dilemma"

This is known as the "Nested Deadline Dilemma". There is a deadline for the overall project. But each component has a deadline. You have a deadline for your bit that requires that other parties in the project meet their deadline. They have a deadline that requires input from a third party. The third party has a deadline. All these deadlines are nested within the framework of the overall project. And somewhere in the plethora of deadlines and interconnected components of the project, something goes wrong.

One deadline in the nest passes due to one of the 4 reasons. The cascading effect on all the other deadlines usually means that, by the time it's sorted out and the project gets back on track, another 3 versions of Windows or Office have been produced (and Bill Gates earns enough money to purchase several small South Pacific countries) and they can no longer read the Wordstar V2.1 or Word 4.2 version of the report that you have written. Each of the nested deadlines pass due to one of the 4 reasons (a different one, or more than one, for each deadline).

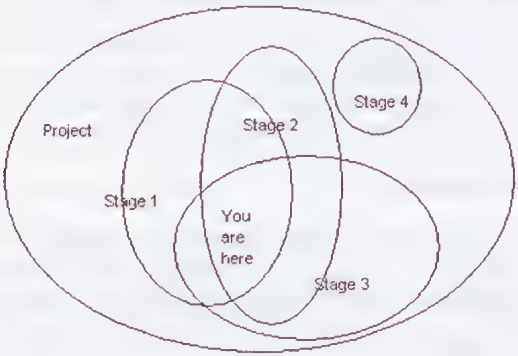
And so time drags on.

But you never know just when the nested deadline dilemma will be resolved. You can't take on significant amounts of new work, because, just as you start, the dilemma is resolved and suddenly you have two full time jobs to finish. So after long periods of waiting, there comes the late nights and strong coffee.

The nested deadline syndrome is a kind of consultants limbo. For these occasions I keep 2 lists. One is a work list, detailing what I have to do and by when. It's the only way I can keep on top of the plethora of smaller projects that the lone consultant is generally involved in. At the start of a project, I create a time line of key dates, and things I need to have done by particular times. Once this is written, I screw it up and throw it in the bin, and get out the second list. This is things I have to do around the house – fix the back fence, replant the front garden, attach the shade cloth properly, paint the ceiling.

Thanks to the Nested Deadline Dilemma, all the things on the second list are going perfectly to plan. Waiting for a Deadline Dilemma to be resolved is an ideal time to get things done around the house!

And once in a while, there is the Circular Deadline Syndrome. Dreamt up by Stephen Hawking, or some other space-time guru, it's when your deadline depends on someone else whose deadline depends on your deadline. It's not very common, but when it occurs, all of space and time gets warped .... which is fine, 'cause it means there's time to get the kitchen renovated.



Diagrammatic representation of the Nested Deadline Dilemma

ARTICLES

STATUS OF WETLAND CONSERVATION TO THE RAMSAR CONVENTION

Every three years The Ramsar Convention on Wetlands holds its Conference of Contracting Parties (COP). One of the earliest international Conventions on the environment, each COP provides an opportunity to review and progress wetlands conservation throughout the world. As a signatory to the convention, Australia has a duty to report on its activities through a National Report using a template provided by the Ramsar Bureau.

Due to Australia's federated system, this process requires extensive consultation with State and Territory agencies. Input into the current draft recognises the role of conservation organisations in the delivery of wetlands programs. In addition, Environment Australia has provided non-governmental organisations the opportunity to comment on the completeness and veracity of the past three draft reports.

As a part of the Australian Wetlands Alliance, members of ASL were provided with an opportunity to comment on the draft Report. A combination of tight reporting deadlines and the size of the Report, which was designed to accommodate responses from all signatories to the Convention (the template alone was in excess of 40 pages) may have affected the accessibility of the document. However, it is hoped that comments on the draft will result in a document that is a useful overview of the status of wetlands conservation, and provides impetus towards better management.

Any further drafts and the final Report will be made available through the ASL list server.

Angela Brady, Australian Wetlands Alliance Secretariat
Email: abrady@wetlands.org.au

UPDATE: CRATER LAKES CAMPERDOWN

Almost two months after receiving the "Lake Gnotuk and Lake Bullen Merri Planning Strategy Discussion paper - Review of Submissions and Recommendations, August 2001" from RPD consultants, Corangamite Shire has 'received' the report through their Regulatory Services Committee. Not their full council meeting.

The report is quite strongly critical of the issuing of the building permits within the craters of the lakes and highlights the strength of the scientific submissions received from the community and the ASL members.

However, in accepting the report the two councillors who spoke were critical of the scientific community in not informing them earlier of the geological, limnological and landscape significance of the sites. "Why weren't we told?" was the cry. This despite a plethora of Shire advertising material promoting the values of the sites to tourists!

Unfortunately, in the letter that accompanied the report, Mr Neil Haydon, the Manager of Planning, Environment and Building Services (the department which issued the permits and was criticised) played down the findings and resolved that;

1. They formally receive the report.
2. Resolve to include it in the Shire's Three -Year review of their MSS in mid 2002.

3. In the interim any further planning applications be advertised pursuant to the Planning and Env't Act 1987. They had previously refused to notify locals even after they requested this.
4. The RPD Group's report be made available to the public. (Big deal, we wrote most of it!).

In communication from RPD, they have requested that the Shire allow them to post it on their website (www.rpdgroup.com). RPD were surprised the Shire had taken so long to act on it.

What next? The RPD report mentioned the possibility of challenging the building permits in VCAT on the grounds that notification was inadequate. There is also a possibility of Ministerial Intervention. Considering the strength of the report and whitewashing and stalling by the Shire, we have decided to apply to VCAT for a review and will start this asap. What do we need?

1. Expert witnesses prepared to give evidence at VCAT testifying to the values of the sites.
2. A town planner to comment on the legitimacy of the process followed by Corangamite Shire.
3. Funding to cover VCAT applications, lawyer and any expert witness fees. We are looking towards PILCH and EDO for the legal side so expenses here will not be excessive.

Finally, this is another landmark case where unless a stand is made early, such sites will continue to be eroded by poorly informed decision making and as the councillors said, we, as Limnos are partly to blame for assuming that they knew what they were doing.

Please let me know if you would like to help.

Stuart McCallum
17 Lowndes Rd Bannockburn Vic 3331, Phone (03)5281 1601
email: smccallum@geelongcollege.vic.edu.au

ENVIRONMENTAL FLOW SEMINAR

Environmental Flow Seminar and Special Issue of the Australian Journal of Water Resources

Dear ASLers

The Environmental Flow Seminar that was convened by the River Basin Management Society, in collaboration with the Institution of Engineers and the CRC for Catchment Hydrology, was a great success! 200 people attended the day and heard a raft of fantastic speakers who discussed the theory, practice and management aspects of environmental flows.

As a result, papers from the seminar and selected others were submitted to the Australian Journal of Water Resources and a special is now being prepared.

Next month, The Australian Journal of Water Resources is publishing a special issue on Environmental Flows. Papers include discussions of environmental flow methods, adaptive management, expert panels, geomorphology, aquatic plants and wetlands. Nore information and an order form, email Mike Stewardson mjstew@unimelb.edu.au. Cost is $27.50 (50 copies for sale).

A pdf file of the flyer and application form is available from both Mike and myself.

Lance Lloyd
President, River Basin Management Society
president@rbms.com.au; www.rbms.com.au

NEW BOOKS

"The Ecology of Running Waters" by H. B. Noel Hynes has been reprinted (originally published in 1971). Noel Hynes classic book compiled a comprehensive, critical review of the literature pertaining to stream limnology. Included are physical and chemical characteristics of flowing waters, plantlife, the benthos, fish and finally, man's effects on watercourses. The book continues to be widely read and influential in the field.

For more information point your browser to http://www.blackburnpress.com/ecofrunwat.html

~~~~~~~~~~~~~~~

"Integrating Research and Management for an Urban Estuarine System: The Swan-Canning Estuary, Western Australia"

Chapters include:

- Integrating research and management for an urban estuarine system: the Swan-Canning Estuary, Western Australia, by David P. Hamilton, Jeffrey V. Turner.
- The dynamics of unattached benthic macroalgal accumulations in the Swan-Canning Estuary, by Helen Astill, Paul S. Lavery.
- Nutrient cycling associated with the seagrass Halophila ovalis in the Swan-Canning Estuary based on seasonal variations in biomass and tissue nutrients, by E. L. Connell, D. I. Walker.
- Trends in total phosphorus and total nitrogen concentrations of tributaries to the Swan-Canning Estuary, 1987 to 1998, by Robert Donohue, W. Angus Davidson, Norman E. Peters, Samuel Nelson, Brad Jakowyna.
- The use of Fick's First Law for predicting porewater nutrient fluxes under diffusive conditions, by Paul S. Lavery, Carolyn E. Oldham, Marco Ghisalberti.
- Zooplankton grazing dynamics: top-down control of phytoplankton and its relationship to an estuarine habitat, by Sandra L. Griffin, Robert J. Rippingale.
- The hydrology of the upper Swan River Estuary with focus on an artificial destratification trial, by David P. Hamilton, Terence Chan, Malcolm S. Robb, Chari B. Pattiaratchi, Michael Herzfeld.
- The benthic macroinvertebrate community of the upper reaches of an Australian estuary that undergoes marked seasonal changes in hydrology, by A. N. Kanandjembo, M. E. Platell, I. C. Potter.
- Abrupt shifts in the fish community of the hydrologically variable upper estuary of the Swan River, by A. N. Kanandjembo, I. C. Potter, M. E. Platell.
- Production by microphytobenthos in the Swan-Canning Estuary, by R. J. Masini, Arthur J. McComb.
- Macrofauna and nutrient cycling in the Swan River Estuary, Western Australia: experimental results, by Melita Pennifold, Jenny Davis.
- Nutrient transport to the Swan-Canning Estuary, Western Australia, by Norman E. Peters, Robert Donohue.
- Phytoplankton of the Swan-Canning Estuary: a comparison of nitrogen uptake by different bloom assemblages, by S. M. J. Horner Rosser, Peter A. Thompson.
- Density-dependent surface water-groundwater interaction and nutrient discharge in the Swan-Canning Estuary, by Anthony J. Smith, Jeffrey V. Turner.
~~~~~~~~~~~~~~~

- Temporal variability of phytoplankton in a salt wedge estuary, the Swan-Canning Estuary, Western Australia, by Peter A. Thompson.
- Interaction between shallow groundwater, saline surface water and nutrient discharge in a seasonal estuary: the Swan-Canning system, by William R. Linderfelt, Jeffrey V. Turner.
- Effects of rainfall and salt-wedge movement on phytoplankton succession in the Swan-Canning Estuary, Western Australia, by L. Twomey, J. John.
- Modelling catchment processes in the Swan-Avon river basin, by Neil R. Viney, Murugesu Sivapalan.

The cost is $35 + GST ($3.50) + postage and can be obtained from Kerryn Jackson (jackson@cwr.uwa.edu.au).

~~~~~~~~~~~~~~~

River Health Report and Stakeholder Profiling Study released

Two major reports relating to the health of the rivers in the Murray-Darling Basin have been released by the President of the Murray-Darling Basin Commission, Dr Roy Green.

The reports are part of a comprehensive program being undertaken by the Murray-Darling Basin Commission to improve river health. "A major research program is being implemented to underpin discussion of the wide range of policy options now being considered" said Dr Green.

The first report, **Snapshot of Murray-Darling Basin River Condition** found that overall biological and environmental condition of the River Murray and lower Darling is degraded throughout those river systems, with an increasing trend in degradation towards the river mouth. Fish populations are in very poor to extremely poor condition throughout the River Murray though in slightly better condition in the lower Darling. Macroinvertebrate communities are generally in poor condition and declining towards the river mouth. The condition of riparian vegetation along the entire river was assessed as poor with grazing and alterations to the flow regime being the major causes.

The quality of wetlands has been significantly reduced, particularly in the area between Hume Dam and Mildura. Most wetland loss is attributed to permanent inundation of previously intermittently flooded wetlands. Hydrological condition in the river channel is poor for all areas, with the extent, timing and duration of floodplain inundation all significantly impacted. Riverine habitat was found to be poor or very poor through all areas with connectivity, riparian vegetation and bedload all affected by regulation. The condition of floodplain inundation was assessed as very poor in all reaches.

The report has been prepared to inform discussion on matters affecting river health in the Basin. It presents an interim picture of river health at two scales - the first a broad view of river health across all rivers in the Basin, the second a more detailed assessment of the health of the River Murray and lower Darling.

"It does not pretend to be more than a glimpse of river health, but the picture is clear - rivers in the Basin are generally in poor ecological condition," said Dr Green.
~~~~~~~~~~~~~~~

This Snapshot is the first collation of river health information prepared specifically for the Basin. The report has been reviewed by the Commission's Independent Sustainable Rivers Audit Group and their overview comments have been included. Importantly, they note that the current level of health is less than what is required for ecological sustainability and that the evidence for decline is inescapable.

The Snapshot report was based on current information, funded by the Murray-Darling Basin Commission and prepared by the CRCFE in collaboration with CSIRO Land and Water and the National Land and Water Resources Audit. The report used information from the National Land and Water Resources Audit, which had collated and recorded the information of State and national programs in a systematic and rigorous manner.

Views on the health of the River Murray have also been collated in a second report released today by the Murray-Darling Basin Commission. This report titled, **Stakeholder Profiling Study** [PDF 202Kb] [Ms word 222Kb] was commissioned by the Project Board of the River Murray Environmental Flows and Water Quality Project.

In releasing this report Dr Green said, "It is the first time that the Murray-Darling Basin Commission has independently and systematically identified a range of community concerns relating to the health of the River Murray. The report was funded by the Murray-Darling Basin Commission and prepared by CSIRO's Australian Research Centre for Water in Society. It provides an insight into the views of more than 300 rural and urban people."

The report indicates that communities do accept the need for change in the management of the River Murray. Communities are concerned about the health of the Murray, they believe the time to act is now and they do want to be involved in decisions that affect the way the river is managed. Understandably, there is divided opinion on issues relating to water allocation, water rights and priority uses. This Stakeholder Profiling Study will help to shape the future community engagement processes that need to be undertaken to address environmental flows and water quality of the River Murray.

Other elements supporting the Environmental Flows project include the construction of fishways on Commission structures to allow fish passage from Hume Dam to the Murray Mouth, water allocations to key environmental areas and revised river management guidelines to produce more natural flow patterns.

Copies of the two reports can be found on the Murray-Darling Basin Commission web site http://www.mdbc.gov.au/

~~~~~~~~~~~~~~~
~~~~~~~~~~~~~~~

Freshwater Fishes of Australia - Field Guide

GR Allen, SH Midgley, M Allen

From tiny gobies to the giant barramundi, this compact volume provides in-depth coverage of nearly 300 species – every fish know to inhabit fresh water on the Australian continent. Every species is illustrated in full colour with additional hints for rapid identification and a concise summary of biological knowledge.

Freshwater Fishes of Australia is a stunning volume and an essential reference for scientists, aquarists, fishers and every person who appreciates Australia's extraordinary natural heritage.

February 2002, Western Australian Museum/CSIRO Publishing.
Paperback 408pp (ISBN: 0 73075 486 3) $45.00

~~~~~~~~~~~~~~~~

Wetland Plants of Queensland - A Field Guide

KM Stephens, RM Dowling

This practical field guide describes and illustrates in colour some 90 common and widespread wetland plants found in Queensland, and gives a distribution map for each species. To assist readers, the book includes a series of keys to help identify those species that are not illustrated in the book, but which may be encountered in the field.

Wetland Plants of Queensland will be an invaluable resource for all those involved in the reclamation of wetlands or the treatment of wastewater; including farmers, environmentalists and all those with an interest in wetland revegetation.

November 2001, CSIRO Publishing.
Paperback, 160pp (ISBN: 0 643 06674 8) $39.95

Both field guides available from CSIRO Publishing: http://www.publish.csiro.au
~~~~~~~~~~~~~~~~

BITS AND PIECES

New RecFishing Code of Practice

The peak national fishing body, Recfish Australia on 10 September 2001, announced the updating and re-release of the National Code of Practice for Recreational and Sport Fishing.

Since the first release of the Code of Practice (CoP) five years ago it has been adopted into the by-laws of numerous Australian fishing clubs and formed the basis of a number of teaching and education programs and publications.

Recfish Australia's Environment Officer, Ross Monash, said today the CoP provided a guide to best practice for recreational fishers in Australia and this was important to protect and conserve the valuable natural resources on which fishing is based.

"Recreational fishing is the only high participation recreation in Australia reliant on the extractive use of natural resources. The CoP will foster an understanding in the fishing community and among those who share the resources and waterways with us about the need to look after fish stocks and the fishing environment." The CoP details 13 preferred behaviours under the four general themes of:

- Looking after our fisheries,
- Protecting the environment,
- Treating fish humanely, and
- Respecting the rights of others.

The addition to the CoP of a new, 13th behaviour under the theme of Protecting the environment demonstrates that the CoP is evolving to accommodate the ever-changing fishing environment. The new topic, "Avoiding interactions with threatened species", promotes behaviours such as becoming aware of threatened species which inhabit areas anglers are intending to fish, reporting sightings of threatened species in distress and observing principles of behaviour when in the vicinity of marine mammals which will further reduce the impact of recreational fishers on threatened species.

The CoP is available in various formats, including a fold-out brochure, poster, flier and stickers. The fold-out brochure and poster portray all 13 behaviours under the four themes and explain the reasoning behind each. The A5 flier summarises all topics into 10 simple guidelines and the three stickers further summarise the guidelines.

"We would like to see the posters at as many caravan parks, tackle shops, fishing clubs, and schools as possible, as it will greatly assist in implementing Recfish Australia's Environment Strategy", Ross said.

People, clubs and fishing-related businesses wanting copies should phone Recfish Australia on 02-6257 1997 or write to the Recfish Office Manager at PO Box 854 Dickson ACT 2602 or E-mail recfish@sportnet.com.au. The CoP materials are free on request but postage and handling costs will be charged.

Media contact: Ross Monash 02-6257 1997, www.recfishoz.com

WA salinity taskforce report - Salinity: A new balance

The Minister for the Environment and Heritage, Dr Judy Edwards MLA, announced on May 31, 2001 that the State Government had appointed a four member taskforce to recommend to the Government improvements to Western Australia's salinity program.

The Minister considered that the taskforce was necessary to provide a more targeted and cohesive response to Western Australia's salinity problem. The Minister, Dr Edwards, released the report of the salinity taskforce entitled Salinity: A New balance, on 11 September.

The report will be used as a framework to guide the State's future investment in salinity management.

The report contains 94 recommendations to Government to improve the State's response to salinity as part of natural resource management in Western Australia in the following key areas:

1. Vision and leadership for salinity management.
2. The existing State Salinity Strategy.
3. Prioritising salinity management and monitoring effectiveness through an investment framework and a targeted monitoring and evaluation program.
4. Technology and industry development for salinity management to directly support farmers to change to more sustainable and profitable enterprises.
5. Community support, capacity building and other mechanisms to provide support and encourage change.
6. Better institutional arrangements and partnerships to promote integration of effort and action on the ground between government, community and industry.
7. Managing salinity's impacts on biodiversity, public assets and communities and
8. Future investment directions.

The full report of WA's salinity taskforce is available on-line at www.ministers.wa.gov.au/edwards/features/salinity.htm

~~~~~~~~~~~~~~~

SAVETHEMURRAY.COM is a long-term internet portal that will become a one-stop reference site promoting communication and engagement with the broad community. It is an initiative of the Governor's Leadership Foundation (part of SA Business Vision 2010). While SA-centric in its early stages, it seeks a broad focus. www.savethemurray.com

~~~~~~~~~~~~~~~

WATER DOWN UNDER is the title of a publication from the state of Alabama (US), not about Australia, but about groundwater. The 86-page publication, available free on the web, is aimed at high school students. www.adem.state.al.us/EduInfo/Publications/downunder/downunder.htm.

~~~~~~~~~~~~~~~

A summary of the Lake Mokoan Restoration Strategy activities for 2000/2001 is now available. Please e-mail Kim Hutchins at <kimh@g-mwater.com.au> if you want a copy of the summary report (about 440K).

~~~~~~~~~~~~~~~

Our journal *European Water Management*, is the official journal of the European Water Association, has started about a year ago, a FREE weekly newsletter by e-mail. It contains press releases, etc. in the field of water management.

Older issues of the newsletter can be seen at www.riza.nl (click on European Water Management News). Further information contact **European Water Management**, Editor-in-Chief, Drs J A van de Kraats, Institute for Inland Water Management and Waste Water Treatment (RIZA), PO Box 17, The Netherlands, E-mail j.vdkraats@riza.rws.minvenw.nl

~~~~~~~~~~~~~~~~

Modelling Victorian Annual Rainfall Data CRC for Catchment Hydrology Working Document 01/1, by Ratnasingham Srikanthan; Tom McMahon; Mark Thyer and George Kuczera. Copies of this working document are available from the Centre Office for $22.00 (includes postage and GST within Australia). Please contact Virginia Verrelli Tel: (03) 9905 2704, Fax: (03) 9905 5033, Email:virginia.verrelli@eng.monash.edu.au.

~~~~~~~~~~~~~~~~

Lake Eyre Fish Guide

The Department of Primary Industries Queensland Fisheries Service (QFS) has released a new field guide on the fishes of central Australia. The guide, entitled "Fishes of the Lake Eyre Catchment of Central Australia", was developed by QFS in conjunction with the Lake Eyre Zonal Advisory Committee, from funding provided by the NHT.

DPI principal policy officer, Bernadette Kerby, said the guide provided a wealth of information to anyone interested in Australian fishes and aquatic ecosystems. "The guide explains that the Lake Eyre Basin, despite being characterised by a lack of water, is home to a unique group of fishes, called the desert fishes," Ms Kerby said. "The guide has colour photographs and a key to the 33 fishes native to the area to assist with identification, as well as sections on the distribution, habitat and biology of these fishes."

"There is information on the angling potential of the native fishes, their eating quality and conservation status, and a section on introduced pest fish." Ms Kerby said that the guide covered the area from the Finke River near Alice Springs, east to the Bulloo River at Quilpie, and from Mount Isa in the north, to Broken Hill in the south.

A limited number of free copies, of "Fishes of the Lake Eyre Catchment of Central Australia", are available to people who live within the Lake Eyre region. To obtain a copy, phone (07) 3227 7259. Copies can be bought from the DPI bookshop for $25, by phoning the DPI Call Centre on 13 25 23 (handling charges apply). Pay by most credit cards.

~~~~~~~~~~~~~~~~

Salinity Appointments

The General Manager, Natural Resources and Deputy Chief Executive of the Murray-Darling Basin Commission, Kevin Goss, has been appointed as the new Chair of Australia's National Dryland Salinity Program (NDSP). Mr Goss replaces Western Australian farmer Alex Campbell, who was recently appointed Chair of the new Cooperative Research Centre for Plant-Based Management of Dryland Salinity.

~~~~~~~~~~~~~~~~

Announcing the Launch of AustAlgae

AustAlgae is a free unmoderated email discussion group, which aims to encourage communication between persons interested in any aspect of Australian freshwater and marine algae; including (but not limited to) taxonomy, ecology, analytical methodologies, harmful algal blooms, etc.

It has been created in response to feedback from delegates of the 3rd Australian Algal Workshop, who either due to their remote location and/or limited internet access, indicated a feeling of isolation from other algal workers. This translated to an inability to source current and relevant information on matters relating to contemporary Australian algal studies. AustAlgae welcomes the posting of announcements and information on both Australian and international courses, workshops and conferences on algal related issues.

Further information can be found at: http://groups.yahoo.com/group/AustAlgae, alternatively the list owner can be contacted at: AustAlgae-owner@yahoogroups.com

~~~~~~~~~~~~~~~~

Hawkesbury-Nepean Water Quality Report

The Department of Land and Water Conservation has released a report on the surface water quality of the Hawkesbury-Nepean Catchment in the four years between 1995 and 1999 which identifies a number of water quality issues which impact on the useability and ecosystem health of the Hawkesbury-Nepean River.

The report set out a range of management solutions for each of these issues to assist water management committees to address the water quality issues within the sub-catchments. It has called for the establishment of a single database network to be established to coordinate data collection and to enable long-term trend analysis. The report, completed earlier this year, is available at www.dlwc.nsw.gov.au.

~~~~~~~~~~~~~~~~

Biodiversity Documents Released

The majority of Australian States and Territories have agreed to adopt specific biodiversity conservation targets aimed at preserving the habitat for threatened and endangered species.

The release of the 'National Objectives and Targets for Biodiversity Conservation 2001-2005' document completed the set of three policy documents which underpin the national biodiversity conservation strategy. The other two documents comprise the 'Review of the National Strategy for Australia's Biological Diversity' and the 'Biodiversity Conservation Research - Australia's Priorities'.

The documents were produced as part of the first five-year review of the National Strategy for the Conservation of Australia's Biological Diversity which was approved by Federal, State and Territory Governments in 1996. While the review did find positive progress towards the goals of the Strategy, it also found that a number of the objectives had not been met, in particular that native vegetation clearing controls were not working effectively.

The conservation targets to be achieved between 2001 and 2005 focus on native vegetation, freshwater ecosystems, marine and estuarine ecosystems, invasive species, dryland salinity, grazing, climate change, indigenous knowledge, access to information and institutional reform.

Copies of the documents are available from Environment Australia on 1800 803 772 or on the website at www.ea.gov.au/biodiversity/publications/objectives/index.html

~~~~~~~~~~~~~~~

Agreement on Spatial Data

The Spatial Information Council (ANZLIC) and the National Land and Water Resources Audit have also signed an agreement for the provision of government-held spatial data for use in mapping Australia's natural resources in projects such as the Australian Natural Resources Atlas.

The agreement will make available data held by the Commonwealth and all states and territories in areas including geodetic control, topographic and thematic maps, satellite imagery, administrative boundaries and digital elevation models.

The Atlas, parts of which have been available on the Web for some months, has been officially launched, providing information on a subject and geographical basis, together with a navigator which assembles all reports for a particular location and a mapping facility which enables users to create customised maps showing a wide range of features and conditions such as water bodies, local government borders, vegetation cover, salinity and other water quality measures, protected areas and so forth.

The Atlas is at www.nlwra.gov.au/atlas. Details of the Spatial Information Industry Action Agenda can be found at www.isr.gov.au/agendas/Sectors/siiaa/index.html.

~~~~~~~~~~~~~~~

Salinity Software Developed

Land and Water Australia and the Grains Research and Development Corporation are contributing $181,408 to a three-year national research project to complete the development of an innovative computer program known as Flowtube which will provide advice to farmers on the best method for combating salinity on their land.

The project, to be headed by Associate Professor Richard Bell and Dr Christopher Clarke of Murdoch University's School of Environmental Science, will involve collaboration between natural resource management agencies from every state in Australia, CSIRO and the University of Melbourne.

~~~~~~~~~~~~~~~

Water Recycling to be Assessed

The Victorian Government is focusing on the potential value to the state of extensive water recycling, with the Minister for Environment and Conservation, Sherryl Garbutt, announcing a $300,000 project to examine the opportunities. The project will assess markets for recycled water, land and ground water capability for high-value irrigated crops and other land use, infrastructure for recycling and associated transport, planning and urban/rural development issues.
~~~~~~~~~~~~~~~

A high-level taskforce has been established to guide a whole-of- Government approach to water recycling. Melbourne Water has set itself the target of increasing the amount of recycled water used to 20% by 2010 compared with 1% in 1999. Currently, around 10% of water from the Eastern Treatment Plant is recycled at the plant and used by used by nurseries, market gardens, vineyards, golf courses and sports grounds following EPA guidelines.

~~~~~~~~~~~~~~~~

Land & Water Australia 2001 - 2006 R&D Plan

Australians respecting and understanding our unique and diverse landscapes is the vision for the 2001-2006 Research & Development Plan for Land & Water Australia.

Land & Water Australia invites people to read its current five-year R&D Plan and assess its national leadership in generating knowledge, informing debate and inspiring innovation and action in sustainable natural resource management. A snapshot brochure is also available.

Land & Water Australia is a statutory corporation established under the Primary Industries and Energy R&D Act 1989, within the Commonwealth Agriculture, Fisheries and Forestry portfolio. The Corporation is specifically responsible for R&D aimed at the productive and sustainable management of the land, water and vegetation resources underpinning Australia's primary industries and regional communities. The Corporation's R&D portfolio of more than 1300 research projects is managed under a matrix of five Arenas and four integrating Themes.

The Arenas are:

1. Improving sustainability and addressing contemporary issues in primary industries.
2. Managing Australian River Landscapes.
3. Managing Vegetation in Rural Landscapes.
4. Future Landscapes and Compatible Industries.
5. Cross-cutting activities.

The Themes are:

1. How we perceive and value our environment.
2. How we learn about and understand our landscapes.
3. How we live in and manage our natural resources.
4. How we organise policies, structures and institutions (governance) at a societal level.

The R&D Plan is available as a printed document and in three www formats:

HTML to read on screen and two download formats (PDF and a new format DjVu which is half the file size of PDF and faster to download). Land & Water Australia invites feedback to <glenn.conroy@lwa.gov.au> on the relative usefulness of these formats to you.

Please see: http://www.lwa.gov.au/html/publications/catalogue/general/r&d_plan_2001-2006/research.htm

~~~~~~~~~~~~~~~~

CRC for Catchment Hydrology Technical Report 01/1

"Irrigator and Community Attitudes to Water Allocation and Trading in the Murrumbidgee Catchment", by John Tisdell, John Ward and Tony Grudzinski.

The importance of efficient water allocations between productive, domestic and environmental uses cannot be overstated, particularly in the Australian context - the driest continent. This report addresses the much-overlooked side of policy development and implementation, namely: the social factors that both hinder and support the change.

This report makes an important contribution to our understanding of how people are actually responding to the new conditions following the implementation of COAG reforms in the Murrumbidgee catchment. With several years since the introduction of tradeable water entitlements, this report provides a timely and insightful check on people's perceptions, understandings and acceptance of the new environment. It indicates a level of progress toward general acceptance, while also indicating a level of confusion and misunderstanding about how water markets should work.

Copies of the report are available from the CRCCH Office for $27.50 (includes postage and GST within Australia). Please contact Virginia Verrelli on Tel:(03) 9905 2704, Fax: (03) 9905 5033, Email:virginia.verrelli@eng.monash.edu.au.

~~~~~~~~~~~~~~~~

Articles required for the Wetlands Australia 2002 Update

Wetlands Australia, the journal produced by Environment Australia, will be released as a World Wetlands Day edition for February 2nd, 2002.

The editors are calling of a range of articles, extending from community participation to scientific research, from peat bogs to icolls and coral reefs. This will be an "annual" edition, so articles that do not 'date' are preferred.

As the edition is scheduled for release in early February, copy is required ASAP. (If you are not able to make the December deadline, have time sensitive material or web-site links, these may be suitable for the soon-to-be released Australian Wetlands Information Network website so send it anyway!). Send any copy to wca@riverland.net.au

Angela Brady, Australian Wetlands Alliance Secretariat

~~~~~~~~~~~~~~~~

Rivers Research Reports CD ROM

This easy-to-use CD ROM contains 20 of the most popular publications from the Riparian Lands Program and the National Rivers Consortium. It features Rehabilitation Manuals and Riparian Land Management Technical Guidelines, RipRap and six Research Reports, all with easy navigation through the contents pages. The CD ROM is a compact way to store your reports and it allows you to explore electronically or download your favourite sections to print. These CDs are free and available from Canprint Communications (lwa@canprint.com.au) or 1800 776 616.

~~~~~~~~~~~~~~~~
~~~~~~~~~~~~~~~~

A Process for Rehabilitating Australian Streams CD ROM

Land & Water Australia and AFFA have teamed up to produce an exciting new CD ROM to assist groups and individuals undertake 'A process for Rehabilitating Australian Streams'. The CD is easy to use, enjoyable and fun. This CD is free and available from Canprint Communications (lwa@canprint.com.au) or Freecall 1800 776 616.

~~~~~~~~~~~~~~~~

Protecting Freshwater Ecosystems in the Face of Infrastructure Development

The Water Research Foundation of Australia (an academic foundation based at the Australian National University) has published a 130 page report which focuses largely on the management of the cumulative effects of incremental water infrastructure development. The document's author, Jon Nevill (Only One Planet Consulting) believes that controlling cumulative effects is one of the most difficult and critical management issues facing the water industry. Arguments concerning management options are discussed across a range of State legislation and policy, bringing in discussions of representative freshwater reserves, the integrated management of ground and surface resources, and compliance enforcement and auditing. The report can be downloaded from: http://www.netspace.net.au/~jnevill/freshwater-a.htm.

~~~~~~~~~~~~~~~~

Thiess Services Riverprizes

Nominations are now called for the Thiess Services International Riverprize of $100,000 and the Thiess Services National Riverprize of $25,000. The prizes recognise excellence in river management and are open to an individual, organisation, agency or group of organisations that can demonstrate outstanding achievement in river management.

Nominations close on 29 May 2002. For nomination forms or more information please visit our website at www.riverfestival.com.au or call Selina Ward (Symposium Manager, Riverfestival Brisbane Pty Ltd) on 07 3846 7444.

~~~~~~~~~~~~~~~~

Murray Darling Basin Vision

A recent meeting of leaders representing State and Federal government, scientists, indigenous communities, environmentalists, landholders and catchment management authorities has tackled the issue of biodiversity, and identified paths to better protect it across the Murray Darling Basin.

The Murray Darling Basin 2051: Setting the Vision workshop gathered stakeholders from all regions in the Basin to better understand the state of biodiversity in 2001 and options for its health in 2051. The participants were challenged to start developing a long-term vision for biodiversity in the Basin, and commit to actions to move ahead.

Specialist materials and sessions explored the use of regional targets for biodiversity conservation, and how they might be incorporated into planning for the health of the Basin, rather than simply being an 'add-on'.
~~~~~~~~~~~~~~~~

All participants in the workshop made individual commitments to take the outcomes of the workshop forward. In addition, each of the 'stakeholder groups' including scientists, conservationists, state and federal government representatives committed to actions to progress the 'visions' work.

For a more comprehensive story on the workshop, including a list of stakeholder groups' commitments, see the scrolling news links on http://www.wwf.org.au

~~~~~~~~~~~~~~~~

Dams, Weirs and River Structures recognised as a Major Threat

The NSW Fisheries Scientific Committee is supporting WWF nominations to acknowledge that structures such as dams, weirs, navigation locks and levee banks are damaging New South Wales rivers.

WWF has just received news that the Scientific Committee is making a final recommendation that the NSW Government list these river barriers as a "Key Threatening Process" under NSW laws.

The Scientific Committee found that:

River structures that modify river flow include dams, weirs, navigation locks, floodgates, culverts, flow regulators, levee backs, erosion control structures and causeways. Thousands of these structures exist in NSW waters.

These river structures damage our river environments by:

- causing 'cold water pollution' or the release of cold water that stops fish and invertebrates breeding
- stop fish moving up and down rivers to feed and breed
- artificially turning the seasons 'upside down', making the rivers full of water during summer and dryer during winter. This disrupts river species' environmental cues for breeding
- allowing more water to be used for human uses and thus reducing the water available for the environment

WWF's Murray Darling Basin Program nominated seven 'key threatening processes' for listing under NSW and Federal laws earlier this year.

Listing this threat under state or federal laws shows political and community recognition that they are significant threats. It also requires that the government consider developing plans to fix the problems.

Alecia Jones, WWF Australia alecia@wwf.org.au

~~~~~~~~~~~~~~~~

Bringing fish back from the brink: a 'mudmap' released

Twenty-nine fish biodiversity hotspots in the Murray Darling Basin and coastal New South Wales have been identified in a new report released in early December by the World Wide Fund for Nature.

The report, "Threatened and potentially threatened freshwater fishes of coastal New South Wales and the Murray Darling Basin", presents a mudmap for strategic management of the ailing native fish populations in coastal New South Wales and the Murray Darling Basin. It is the first known comprehensive investigation of areas of critical conservation value in the region.

The report includes a localised set of management suggestions focussed on regions throughout the Basin and NSW Coastline. Management options are suggested for regions including the Paroo River, Balranald Weir, the Bega River, Moruya River, the Upper Murrumbidgee River and Broadwater National Park.

The report details information on the opportunities to address conservation in these biodiversity hotspots through threatened species legislation, community action and engineering solutions. This includes a breakdown of likely costs of implementation.

The report also highlights:

- A comprehensive guidebook of coastal New South Wales and Murray Darling Basin native fish, including conservation synopses on each of the thirty fish examined. The guide includes a summary of each species' biology, ecology, distribution, current conservation status and management options;
- A set of beautiful species illustrations by NSW Fisheries' Jack Hannan to aid identification;
- A snapshot of the grim state of fish in the regions. The report reports to a serious decline in abundance of a number of species and may indicate that the range of these species is shrinking. Of thirty species examined in the report, two are recommended for listing as Critically Endangered, two more as Endangered, three as vulnerable, two are Lower Risk near threatened and eleven species as data deficient;
- An investigation of the key threats to fish biodiversity in these regions; and
- An exploration of future research needs.

Copies of the report are available for $15.00, and can be ordered by phoning Noeleen Crispo at WWF on (02) 9281 5515 or emailing ncrispo@wwf.org.au.

~~~~~~~~~~~~~~~~

The Australian Conservation Foundation Sydney Office has moved. The new contact details are given below. Please update your address book.

Dr Stuart Blanch
Healthy Rivers Campaign Coordinator
Australian Conservation Foundation
Level 1, 29-35 Shepherd St
CHIPPENDALE NSW 2008

Phone (02) 9212 6641
Fax (02) 9212 6977
Mobile 0418 132 053
Email s.blanch@acfonline.org.au

~~~~~~~~~~~~~~~~

FORTHCOMING CONFERENCES/WORKSHOPS

OVERSEAS

Environmental Flows for River Systems: An International Working Conference on Assessment and Implementation" is to be held in Cape Town, South Africa from 3 to 8 March 2002. It will incorporate the **Fourth International Ecohydraulics Symposium**, and address the critically important topic of sustainable use of water resources in the new millennium. For further information, please contact the organisers on Ph: +(27) 21 685 4166; Fax: +(27) 21 685 4630; E-mail: conference2002@southernwaters.co.za; Web site: www.southernwaters.co.za

Shallow Lakes 2002 International Conference on Limnology of Shallow Lakes Balatonfüred, Hungary, 25 to 30 May 2002. Web site: www.shallowlakes.hu

2nd International Conference **New Trends in Water and Environmental Engineering for Safety and Life: Eco-Compatible Solutions for Aquatic Environments**, Capri (Italy), June 24-28, 2002. Additional information about the Conference, topics, modalities and registration on-line can be found at the web page: www.capri2002.com

18th International Congress on Irrigation and Drainage, Montreal (Canada), 21-28 July 2002, Special Seminar on Malaria in Irrigated Agriculture. For more information contact Eline Boelee (workshop coordinator) Email: e.boelee@cgiar.org

International Peat Society Symposium "Peatland Ecology and Efficient Peat Use", Russia, Tomsk, August 21 –25, 2002. Register to the Symposium Chairman, via E-mail: krutikov@iom.tsc.ru

3rd World Water Forum. 16-23 March, 2003 at The Kyoto International Conference Hall, Kyoto, Japan. See: http://www.worldwaterforum.org/eng/index.html

29th International Association of Theoretical and Applied Limnology August 2004. (SIL): Helsinki, Finland.

AUSTRALIAN

14th Taxonomic Workshop to be held at Lake Hume Resort (Albury) on 5 and 6 February 2002. Hosted by the MDFRC and the CRCFE. Further information by phoning (02) 6058 2300.

The National Centre for Tropical Wetlands Research and The Environment Centre NT, Darwin are collaborating to make World Wetlands Day 2002 a memorable one. A half day seminar entitled "**People in Tropical Wetlands**" will be held at the Northern Territory University on 8th February, covering topics including Working with Tropical Wetlands, Ecotourism in Tropical Wetlands and Cultural Heritage Management of Tropical Wetlands. In the morning of 9th February, there will be a field trip to three local wetlands sites: early morning at Fogg Dam, the Adelaide River Floodplain at 'Window on the Wetlands' and Knuckey's Lagoon. See www.nctwr.org.au for further information.

The **46th Annual Australian Agricultural & Resource Economics Society (AARES) Conference** is being held in Canberra on 13-15 February 2002. AARES is the second largest society world wide for agricultural and resource economists (behind the American Society) with more than 600 members from branches in Australia, New Zealand and internationally. The Annual Conference is designed to improve public understanding of resource use, environmental issues and agricultural economics, and to promote, publish and disseminate research results to the wider community, especially policy makers.

For further information or to obtain a copy of the registration brochure, please visit the Conference website at http://come.to/aares. Alternatively, send an email to the Conference organiser at AARES@all-occasions.com.au.

Getting It Right: Guiding Principles for Natural Resource Management in the 21st Century, Adelaide Convention Centre, March 11 - 12, 2002

With a massive commitment by individuals, communities and government to improve the sustainability of Australia's landscapes, it is crucial that wise decisions are made about where and how to invest resources. While universities, CSIRO and Government have been working to formulate strategic solutions and responses, much of this knowledge remains inaccessible to on-ground managers. The aim of this national symposium is to draw together information from Australia's key thinkers and create a set of guiding principles. Keynote speakers will discuss biodiversity, soil degradation, water quality, the greenhouse effect, and the social, economic and political context of landscape change. Further information from the Website: www.plevin.on.net/GIR Email: events@plevin.com.au.

Land & Water Australia's **River Forum** will be a two-day forum (20 and 21 March 2002), providing a mix of formal thought-provoking presentations and field-based experience. The first day of the Forum is designed to promote debate, stimulate ideas and provide perspectives and insights about river management (to be held at Old Parliament House); focussing on four themes: Protecting our rivers; Planning for river protection and restoration; Rivers and rural industries; and Promoting and communicating our message. The second day of the Forum is called 'Researchers on a Riverbank' and will be held in the Yass region. Registration forms will be available on the www.rivers.gov.au website in December, and the December/January edition of RipRap will have full detsils of the River Forum program and registration forms.

ENVIRO 2002 and the IWA World Water Congress, to be held at the Melbourne Exhibition and Convention Centre, 7-12 April 2002. Websites www.enviroaust.net or www.iwa-2002.com

2002 Centenary of Water Conference will be held at Corowa on 11 and 12 April 2002. Further details in next edition.

International Groundwater Conference – Balancing the Groundwater Budget presented by the International Association of Hydrogeologists, Australian National Chapter. The Conference is to be held in Darwin, 12-17 May 2002. Further details on: http://www1.octa4.net.au/iahnt/conference.htm

The **27th Hydrology and Water Resources Symposium** will be held in Melbourne, from 20th to 23rd May 2002 at the Hilton on the Park, Melbourne. The Symposium's theme is "The Water Challenge - Balancing the Risks." How do we achieve a sustainable balance between the hydrological risks associated with competing demands for water resources? Contact the Symposium Organisers: info@convention.net.au

4th Queensland Environmental Conference Environmental Solutions ~ Meeting the Challenge in 2002 Practical and Sustainable Solutions for Government, Industry and Infrastructure.; 30-31 May 2002, Brisbane Convention Centre. Hosted by The Environmental Engineering Society (Qld Chapter) and The Institution of Engineers (Qld Division). Further information - Mr Keron Gaul (07) 3510 2114; Web site: http://www.eesq.com.au

The 5th International Symposium on Spatial Accuracy Assessment in Natural Resources and Environmental Sciences (**Accuracy 2002**), is to be held at Rydges Carlton Hotel, 701 Swanston Street, Carlton (Vic) from Wednesday 10 July to Friday 12 July, 2002. All enquiries to The Conference Organiser, Accuracy 2002 Symposium, PO Box 214, East Brunswick, Victoria 3057, E-mail: conorg@ozemail.com.au

World Congress on Aquatic Protected Areas 2002: What works best and how do we know? The inaugural World Congress on Aquatic Protected Areas will be held in conjunction with the 31st Annual Conference of the Australian Society for Fish Biology. This important event will be held 14 to 17 August 2002 in Cairns, Queensland, Australia. Further information from OzAccom Conference Services, PO Box 164, Fortitude Valley QLD 4006, Email: apa2002@ozaccom.com.au Website: www.ozaccom.com.au/apa2002

Riversymposium 2002 - Fifth International River Management Symposium 3 to 6 September 2002, at the Brisbane Convention and Exhibition Centre. The Theme for 2002 is "The Scarcity of Water - The Future of Rivers, The Future of Water".

The 2002 program includes sessions on dams, irrigation, climate change and rivers, reducing water consumption, tropical rivers, indigenous river management, conservation and management of wild river and land use impacts and salinity amongst others.

Opening keynote speaker will be Peter Gleick and other keynote speakers include Dai Qing, Stephanie Lindloff, Medha Paktar and David Carpenter. Call for papers is now open. Please visit our website at www.riverfestival.com.au or phone Selina Ward (Symposium Manager, Riverfestival Brisbane Pty Ltd), on 07 3846 7444 for a brochure.

ASL VOLUNTEERS

The following members have volunteered to speak as experts on behalf of the ASL.

If you wish to be included on the list contact:

Dr Richard Marchant (ASL Secretary)
Email: rmarch@mov.vic.gov.au

Prof Angela Arthington:
in stream flows, ecology of exotic fishes, conservation of rare fishes.
Centre for Catchment & In-Stream Research, Griffith University, Natham Qld. 4111.
Phone (07) 3875 7403, Fax (07) 3875 7615, email: a.arthington@mailbox.gu.edu.au

A/Prof Paul Boon:
bacteriological issues, wetlands.
Environmental Management, Victoria University of Tech., PO Box 14428 MMC, Vic. 3000.
Phone (03) 9365 2214, Fax (03) 9365 2465, email: paul.boon@vu.edu.au

Dr Andrew Boulton:
INTERMITTENT STREAMS, HYPORHEIC ZONES, FLINDERS RANGES.
Department of Ecosystem Management, University of New England, Armidale, NSW 2351.
Phone (02) 6773 3760, Fax (02) 6773 2769, email: aboulton@metz.une.edu.au

Dr Margaret Brock:
temporary wetlands, aquatic plants.
Centre for Natural Resources, DLWC, PO Box U245, UNE, Armidale, NSW 2351.
Phone (02) 6773 5268, Fax (02) 6773 5288, email: mbrock@dlwc.nsw.gov.au

Prof. Stuart Bunn:
stream ecology, ecology of riparian zones, biomonitoring.
Centre for Catchment & In-Stream Research, Faculty of Environmental Sciences, Griffith University, Nathan, Qld. 4111.
Phone (07) 3875 7407, Fax (07) 3875 7615, email: S.Bunn@mailbox.gu.edu.au

A/Prof. Jenny Davis:
wetland and stream ecology, ecology of central Australian waterbodies.
School of Environmental Sciences, Murdoch University, Murdoch WA 6150.
Phone (08) 9360 2939, Fax (08) 9310 4997, email: davis@essun1.murdoch.edu.au

Dr Michael Douglas:
tropical freshwater ecology, intermittent streams, tropical floodplains.
School of Biological and Environmental Sciences, Northern Territory University, Darwin, NT 0909.
Phone (08) 8946 7261, Fax (08) 8946 6847, email: michael.douglas@ntu.edu.au

Dr Tim Entwisle:
taxonomy and ecology of freshwater macroalgae.
Royal Botanic Gardens Sydney, Mrs Macquaries Road, Sydney NSW 2000.
Phone (02) 9231 8113, Fax (02) 9251 4403, email: tim.entwisle@rbgsyd.nsw.gov.au

Dr Max Finlayson:
wetlands, Ramsar convention.
Supervising Scientist Group, ERISS, Locked Bag 2, Jabiru, NT 0886.
Phone (08) 8979 9756, Fax (08) 8979 2449, email: maxf@eriss.erin.gov.au

Dr Mike Grace
nutrient cycling and biogeochemical processes.
CRC for Freshwater Ecology/Water Studies Centre, Chemistry Department, PO Box 18, Monash University, Clayton Vic. 3800.
Phone (03) 9905 4078, Fax (03) 9905 4196, email: Michael.R.Grace@sci.monash.edu.au

Dr Tom Grant:
platypus biology.
Biological Science, University of NSW, PO Box 502, Cronulla NSW 2230.
Phone (02) 9527 2862, Fax (02) 9527 2862, email: t.grant@unsw.edu.au

Dr Mark Harvey:
water mites.
Department of Terrestrial Invertebrates, Western Australian Museum, Francis Street, Perth WA 6000.
Phone (08) 9427 2737, Fax (08) 9427 2882, email: mark.harvey@museum.wa.gov.au

Mr Kent Hortle:
impact of mining, impact of development in SE Asia and PNG on rivers.
EMA Pty Ltd, 11 Gallus Close, Vermont Vic. 3133.
Phone and Fax: (03) 9873 5887, email: kent_hortle@bigpond.com

A/Prof Pierre Horwitz:
conservation of freshwater invertebrates.
Centre for Ecosystem Management, Edith Cowan University, Joondalup Drive, Joondalup WA 6027.
Phone (08) 9400 5558, Fax (08) 9400 5070, email: p.horwitz@cowan.edu.au

Dr Paul Humphries:
fish ecology, in-stream flows.
CRC for Freshwater Ecology, MDFRC, PO Box 921, Albury NSW 2640.
Phone (02) 6058 2317, Fax (02) 6043 1626, email: hump@mdfrc.canberra.edu.au

Dr Gary Jones:
cyanobacterial blooms.
CRC for Freshwater Ecology, Building 15, University of Canberra ACT 2601.
Phone (02) 6201 5168, Fax (02) 6201 5038 email: gjones@enterprise.canberra.edu.au

Prof. P. Sam Lake:
stream ecology, conservation freshwater biota.
Department of Biological Sciences, PO Box 18, Monash University, Clayton Vic. 3800.
Phone (03) 9905 5653, Fax (03) 9905 5613, email: Sam.Lake@sci.monash.edu.au

Dr Vladmir Matveev:
plankton food webs, biomanipulation.
CSIRO Land and Water, 80 Meiers Road, Indooroopilly Qld 4068.
Phone (07) 3214 2755, Fax (07) 3214 2881, email: Vladimir.Matveev@bne.clw.csiro.au

Ms Kerri Muller:
constructed wetlands, wetlands of the lower Murray.
River Murray Catchment Water Management Board, 1 Colman Terrace, Strathalbyn SA 5255.
Phone (08) 8536 8125, Fax (08) 8536 8126, email: kerri_muller@triplei.com.au

Dr Richard Pearson:
tropical freshwater ecology.
School of Tropical Biology, James Cook University, Townsville Qld. 4811.
Phone (07) 4781 5466, Fax: (07) 4781 5511, email: richard.pearson@jcu.edu.au

Dr Winston Ponder:
taxonomy, biogeography and biology of freshwater mollusca.
Invertebrate Zoology, Australian Museum, 6 College Street, Sydney NSW 2010.
Phone (02) 9320 6120, Fax (02) 9320 6050, email: winstonp@amsg.austmus.gov.au

Dr Jim Puckridge:
ecology of arid zone rivers, ecology of freshwater fish.
Department of Environmental Biology, University of Adelaide, Adelaide SA 5005.
Phone (08) 8303 5689, Fax (08) 8303 4364, email: jim.puckridge@adelaide.edu.au

Dr Melody Serena:
platypus ecology and conservation.
Australian Platypus Conservancy, PO Box 84, Whittlesea VIC 3757.
Phone (03) 9716 1626, Fax (03) 9716 1664, email: platypus@vicnet.net.au

Dr Russ Shiel:
planktonic and littoral microfauna, billabong ecology.
Visiting Research Fellow, Department of Environmental Biology, University of Adelaide SA 5005.
Phone (08) 8303 5294, Fax (08) 8303 6222, email: russell.shiel@adelaide.edu.au

Dr Brian Timms:
lake geomorphology, coastal dune lakes, arid zone wetlands.
Department of Geography and Environmental Science, University of Newcastle, Callaghan NSW 2308.
Phone (02) 4921 5080, Fax (02) 4921 5877, email: ggbvt@cc.newcastle.edu.au

Dr Lloyd Townley:
groundwater-surface water interaction.
Townley & Associates, PO Box 425, Claremont WA 6010.
Phone (08) 9389 6377, Fax (08) 9389 6477, email: ltownley@townley.com.au

A/Prof Keith F. Walker:
Murray-Darling basin rivers.
Department of Environmental Biology, University of Adelaide, Adelaide SA 5005.
Phone (08) 8303 5595, Fax: (08) 8303 4364, email: keith.walker@adelaide.edu.au

Prof. W.D. (Bill) Williams:
Salt lakes.
Department of Environmental Biology, University of Adelaide, Adelaide SA 5005.
Phone (08) 8379 1924, Fax: (08) 8338 6045, email: bwilliam@camtech.net.au

ASL MEMBERSHIP FORM

A few changes have been to the membership form since the last issue. ASL is not registered for GST, therefore ASL does not charge GST. Alternatively go to the ASL website (http://www.asl.org.au/asl_member.htm), follow the link to 'Membership application via the web'. Fill in the details on the form, including credit card details and submit.

MEMBERSHIP FORM

Surname:... ... ...

Given Name: ... ...

Australian Society for Limnology Inc, ABN 54 606 483 226

Membership Rates for 2001/2002

Member:	$ 40.00
Student Member:	$ 20.00
Ten Year Member:	$350.00

Method of payment : Cheque ( ) Money Order ( ) Credit Card ( )

Please Debit my:

Bankcard ( ) Visa card ( ) MasterCard ( )

Card number _____ _____ _____ _____

Amount $..... Expiry Date .....

Name of card holder .....

Signature .....

Please Return to:

Margaret Hart
Treasurer/Membership Officer
22 Netherby Avenue
Wheelers Hill VIC 3150

Fax (03) 9545 3549

ELECTRONIC NEWSLETTER APPLICATION FORM

If you are a member of the ASL and want to receive your newsletter electronically, then please fill in the form below. Members who do not want to receive an electronic version, and would rather still receive the paper version will continue to do so, but you are encouraged to also fill in and send the form below (we do not have plans to phase out the paper version).

I am a member of the ASL and my name is:... ... ...

My email address is: ... ...

I would like to receive the ASL newsletter emailed in

- Rich Text Format (.rtf)[1] - Word compatible •
- In Portable Document Format (.pdf)[2] - Adobe Acrobat compatible •
- In another format (please state which other format you would like to receive the ASL newsletter in).

... ...

[1] Rich Text Format (.rtf) is a format that can be opened in any word processor, although slight variations in layout may occur in different programs.

[2] Portable Document Format (.pdf) is a format that looks and prints exactly as the publisher intended. It can be opened using Adobe Acrobat viewer which is free and can be downloaded from their website.

Please Return to:

Margaret Hart
Treasurer/Membership Officer
22 Netherby Avenue
Wheelers Hill VIC 3150

Fax (03) 9545 3549

REGIONAL EXECUTIVE MEMBERS 2001-2002

NSW	Jane Growns	jane.growns@studentmail.newcastle.edu.au	02 4982 1232	02 4982 2265
	Deb Nias	dnias@dlwc.nsw.gov.au	02 6023 1822	02 6041 4223
Qld	Jon Marshall	marshallj@dnr.qld.gov.au	07 3848 1504	07 3848 5191
SA	Paul McEvoy	paul.mcevoy@sawater.sa.gov.au	08 8259 0336	08 8259 0228
WA	Megan McGuire	mcguire@essun1.murdoch.edu.au	08 9360 6298	08 9310 4997
NT	Frederick Bouckaert	frederickb@criss.erin.gov.au	08 8979 9707	08 8979 2076
VIC	Mike Shirley	mshirley@skm.com.au	03 9248 3246	03 9248 3364
Tas	John Gooderham	flatworm@ozemail.com.au	03 9888 2915	
Web master	Simon Josey	webmaster@asl.org.au	02 6270 7665	02 6270 7696

EDITORIAL ADDRESS

Ms Rhonda Sinclair
The Murray-Darling Freshwater Research Centre
CRC for Freshwater Ecology
CSIRO Land and Water
P.O. Box 921
ALBURY NSW 2640

Phone (02) 6058 2331
Fax (02) 6043 1626
Email Rhonda.Sinclair@csiro.au

Australian Society for Limnology email list

List functions: email ASL-help@asl.org.au

Website: http://www.asl.org.au

If not deliverable please return to:
Australian Society for Limnology
22 Netherby Avenue
WHEELERS HILL VIC 3150

SURFACE MAIL

POSTAGE
PAID
AUSTRALIA

Print Post Approved

PP381667/00125